OFFICIAL SPONSOR
AUSTRALIA'S DEFENCE
AMERICA'S CUP 1987

Holden

RODEO

OWNER'S HANDBOOK

KB SERIES

Vehicle Identification Certificate

Owner's Name Mr. Mrs. Miss .....

Address .....

Town ..... Phone .....

State & Postcode .....

Reg. No. .....

Model Name .....

Vehicle Identification Number (V.I.N.) .....

Eng. No. .....

Odometer Reading .....

Selling Dealer's Stamp & Signature .....

Date of Acquisition .....

Part No. 92029059 May 1985

Delivery Certificate ..... Page 90

Index ..... Page 118

This handbook contains important information necessary for the good performance and maintenance of the vehicle. Please leave it in the vehicle at the time of resale to assist the new owner.

GENERAL MOTORS-HOLDEN'S SALES PTY. LIMITED

New Vehicle Warranty

GENERAL MOTORS-HOLDEN'S SALES PTY. LTD. HEREBY WARRANTS THAT IT WILL MAKE GOOD, WITHOUT CHARGE, ANY DEFECT WHICH APPEARS IN THE VEHICLE IDENTIFIED IN THE VEHICLE IDENTIFICATION CERTIFICATE FOUND ON THE INSIDE OF THE FRONT COVER.

Provided

1. the defect has been notified to an authorised GMH Dealer or Service Dealer:
   (a) before the vehicle has travelled a distance of 20,000 km, or:
   (b) within 12 months of the date of delivery of the vehicle to the first retail purchaser (or in the case of a Demonstrator vehicle within 12 months of the date when it was first placed into service by the Dealer)

   whichever comes first, and

2. the vehicle has been returned to an authorised GMH Dealer or Service Dealer

And

3. the Dealer has determined that the defect complained of *is* one of material or workmanship and *is not* caused by:
   (a) misuse or abuse of the vehicle such as by racing, rallying, overloading, etc. or by neglect
   (b) operation of the vehicle after it is known to be defective
   (c) accident or deliberate act
   (d) atmospheric fallout or flood, hail, salt, etc.
   (e) failure to carry out proper maintenance service
   (f) alteration or modification of the vehicle
   (g) the fitting of parts or accessories not marketed by GMH
   (h) any work carried out on the vehicle by someone other than an authorised GMH Dealer or Service Dealer,

BY THE DEALER (or as otherwise decided by GMH Sales) MAKING GOOD THE DEFECT BY REPAIR OR, AT THE OPTION OF GMH SALES, BY REPLACEMENT.

Excluded from this Warranty are

- defects in tyres or tubes (these being warranted by their manufacturers), and services such as engine tuning, brake adjustment, replacement of air and oil filters, etc. which are required as part of normal vehicle maintenance.

This Warranty applies only to vehicles operated in Australia and is given to the person who is entitled to possession of the vehicle whether as owner lessee or otherwise and is given in addition to all rights conferred by law on that person.

Owners of vehicles operated outside Australia should consult their local dealer regarding the warranty applicable to their vehicles.

Notice to Customers

No GMH dealer or other person is authorised or permitted to give or make any statement, assertion or undertaking in relation to the quality, performance, characteristics, descriptions or fitness for any purpose of any GMH product or in connection with the supply of any GMH product, which is at variance with any written statement, assertion or undertaking on any of these subjects given or made by General Motors-Holden's Limited or General Motors-Holden's Sales Pty. Ltd. in its published sales literature, and neither company accepts any liability for any such unauthorised action.

General Motors-Holden's Limited and General Motors-Holden's Sales Pty. Ltd. have franchised dealers in many parts of Australia for the sale of service parts and the provision of service to owners of GMH's products. Every endeavour is made to ensure that such dealers carry adequate stocks of service parts, and are equipped to provide satisfactory service, but neither General Motors-Holden's Ltd. nor General Motors-Holden's Sales Pty. Ltd. makes any promise that such parts or service facilities will be available, or available at any specific location or any particular time.

GMH Parts and Accessories Warranty

General Motors-Holden's Limited warrants in respect of GMH parts and accessories required as replacement parts, that it will make good by repair or at its option by replacement any defect occurring in any such GMH parts and accessories within 12 months from the date of acquisition or in the case of a GMH part or accessory which has been installed in a vehicle by a GMH Dealer or Service Dealer before such vehicle has travelled a distance of 20,000 kms from the date of installation, whichever first occurs.

A Message from GMH

Thank you for choosing Holden. Your new Rodeo is the product of many years research and planning. We are very pleased and proud of the result—as we are sure you will be.

To understand your new vehicle fully, please take the time to read through this handbook and keep it in the vehicle at all times for quick reference.

Full understanding of your vehicle's performance, warranty and maintenance procedures will add greatly to your enjoyment.

On behalf of all here at GMH, may we wish you and your vehicle many years of happy motoring.

HOLDEN GMH

This handbook applies to all Rodeo KB models including Diesel, and explains all equipment including options. You may therefore find reference to some equipment not installed on your vehicle.

SECTION 1: Page 3

Getting to know your Rodeo

Running In, Fuel Economy Tips, Safety Checklist, Keys and Locks, Mirrors, Windows, Seats, Seat Belts, Child Restraints.

SECTION 2: Page 15.

Starting and Operating

Steering Column Controls, Starting and Driving, Transmission and Floor Controls, Brakes, Instrument Panel Controls and Dials, Radio, Ventilation, Air Conditioning.

SECTION 3: Page 35.

Emergencies, Safety and Emission

Spare Wheel Storage, Wheel Changing, Overheating, Diesel Sedimentor, Towing, Loading, Push Starting, Starting with Jumper Lead, Emission Control Systems.

SECTION 4: Page 55.

Owner Relations and Authorised GMH Dealers

Owner Relations, Owner Relations Managers, Authorised GMH Dealers.

SECTION 5: Page 61.

Specifications

Serial Numbers, Model Identification, Vehicle Dimensions, Engine Data, Capacities, Clearance and Settings, Fuses, Headlamps and Bulbs.

SECTION 6: Page 75.

Appearance, Maintenance and Service

Caring for your Rodeo, Washing and Cleaning, Service and Maintenance, Oil, Cooling System, Lubricants, Tyres, Maintenance Plan.

When it comes to servicing, remember that a GMH Dealer has the trained personnel and specialised equipment to correctly service your vehicle.

For the proper maintenance and performance of the vehicle use only quality GM and AC Delco parts which are identified by one of these trademarks.

The use of parts, additives or treatments other than those marketed by GM and AC Delco may be detrimental to your vehicle and may void your New Vehicle Warranty.

All illustrations and specifications contained in this handbook are based on the latest product information available at time of publication approval. The right is reserved to make changes, at any time, without notice, in prices, colours, materials, equipment, specifications and models, and to discontinue models. Check with your Holden Dealer for complete information.

Section 1

Getting to know your Rodeo

Important

Fuel Requirements Petrol

If your vehicle is not fitted with a restrictor in the fuel pipe then you may use leaded or unleaded petrol with an octane number (RON) of 89 or higher.

If your vehicle is fitted with a restrictor in the fuel filler pipe then you must use unleaded petrol with an octane number (RON) of 89 or higher.

These vehicles are also identified by a label attached near the fuel filler which states "unleaded petrol only".

Diesel

If your Rodeo is equipped with a Diesel engine use a Diesel fuel of 45 Cetane rating minimum.

Running in

These days, there's no need to follow a rigid running-in schedule. However, if you observe a few simple points during the first few hundred kilometres of driving, you will add to the vehicle's future performance and economy.

For the first 500 kilometres, don't go over 80 km/h. Up to 1500 kilometres, avoid driving at any one speed — either slow or fast — for any length of time.

Include some higher speeds in your driving. This helps prolong the life of parts and helps with fuel and oil economy. But never drive at high speed until the engine is thoroughly warm.

Full throttle acceleration is not recommended before the car has done 3000 kilometres.

Important information on vehicle loading

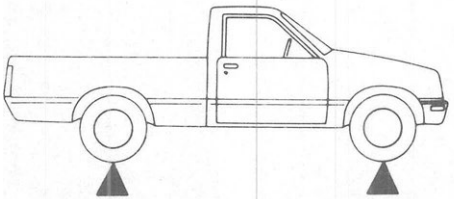
Overloading

Safety Caution:

The components of your Holden Rodeo are designed to provide satisfactory service if the truck is not loaded in excess of either the Gross Vehicle Mass Rating (GVMR) or the Maximum Front and Rear Gross Axle Mass Ratings (GAMR's) specified in the chart.

Overloading is a safety hazard and could also shorten the life of your vehicle or its parts.

At all times the total of the front axle load and the rear axle load should not exceed the maximum loaded vehicle mass specified.



REAR GAMR FRONT GAMR

MODEL DESIGNATION	MAXIMUM GVMR	REAR GAMR	FRONT GAMR
KBD27	2350 kg	1600 kg	850 kg
KBD27Y	2350 kg	1600 kg	850 kg
KBD27W	2250 kg	1600 kg	850 kg
KB28	2350 kg	1600 kg	850 kg
KB28Y	2350 kg	1600 kg	850 kg
KB28S	2350 kg	1600 kg	850 kg
KB29	1800 kg	950 kg	850 kg
KB29W	1800 kg	950 kg	850 kg
KB29S	1800 kg	950 kg	850 kg
KBD42	2350 kg	1600 kg	950 kg
KBD42Y	2350 kg	1600 kg	950 kg
KB44	1800 kg	950 kg	950 kg
KB44Y	1800 kg	950 kg	950 kg
KBD47W	2250 kg	1600 kg	950 kg
KBD47Y	2350 kg	1600 kg	950 kg
KB48S	2350 kg	1600 kg	950 kg
KB48Y	2350 kg	1600 kg	950 kg
KB49S	1800 kg	950 kg	950 kg
KB49W	1800 kg	950 kg	950 kg

Body Style Suffix:
Nil Pick Up
Y Cab Chassis
W Crew Cab
S Space Cab

GVMR (Gross Vehicle Mass Rating)

''Gross Vehicle MASS Rating'' means the maximum load carrying capacity of the truck, including the truck itself, all items added to the truck after it has left the factory such as bodies, winches, booms, etc., the driver, all occupants, and everything that is loaded into (or onto) the truck. The GVM rating represents the weight of that complete vehicle, taking into consideration the engine, transmission, frame, spring and tyre capabilities.

Maximum front and rear axle mass

The mass of the payload must be properly distributed over both the front and rear axles, although not necessarily evenly. The front or rear ''Gross Axle Mass Rating'' means the maximum weight that the front or rear axle can carry. Actual front and rear end mass at the ground can only be determined by weighing the vehicle. This can be accomplished at highway weigh stations, or other such commercial facilities. For assistance in this regard, consult your GMH dealer.

Care should also be exercised to see that the payload is distributed on both sides of the centreline of the truck as equally as possible.

Tyres

It is important that the tyres on your truck are of the proper size, and be properly inflated, for the load which you are carrying. It is important to avoid over-inflation as well as under-inflation. The ''Tyre Inflation Table'' in the Service and Maintenance section of this manual provides inflation pressure information.

CAUTION: When using your vehicle to transport luggage or other cargo, it is recommended that the articles be secured in place. This precaution will help prevent such items from becoming projectiles in the event of an accident.

Running in a new vehicle

Future performance and service life of your vehicle are under the direct influence of care and treatment that your vehicle will receive during the initial running in period. It is therefore, recommended that, during the first 1,000 km of break-in period, the following few simple precautions be carefully observed.

- It is recommended that your speed during the first 1,000 km of break-in period be confined to a maximum of 100 km/h, petrol engine and 90 km/h diesel engine.
- Avoid engine racing, abrupt starting and needless hard stops, except in an emergency.
- Always let the engine idle until it reaches normal operating temperature.
- Avoid overloading.
- Confine your speed to the following recommendations.

To properly break-in 4 wheel drive components select 4WD with gear shift lever and drive the vehicle forward a few metres to 'lock in' the hubs. Then stop and select 2H. **Do not** reverse the vehicle. Now, only two wheels are driving but the hubs are still engaged. The vehicle should then be driven in this mode for the first 300 km. Remember — if you reverse, the hubs will unlock and you must reset them until 300 km is reached.

4 x 2 Models **Max. allowable speed during break-in period**

	Model	1st gear	2nd gear	3rd gear	4th gear	5th gear*
First 1,000 km	Model with Petrol Engine	25 km/h	40 km/h	70 km/h	100 km/h	105 km/h
	Model with Diesel Engine	20 km/h	30 km/h	50 km/h	85 km/h	90 km/h

* Do not labour engine in 5th gear.
Only use on long flat and downhill running.

4 x 4 Models

	Model	Transfer Position	1st gear	2nd gear	3rd gear	4th gear	5th gear
First 1,000 km	Model with Petrol Engine	2H, 4H	25 km/h	40 km/h	70 km/h	100 km/h	105 km/h
		4L	15 km/h	20 km/h	35 km/h	55 km/h	55 km/h
	Model with Diesel Engine	2H, 4H	20 km/h	30 km/h	50 km/h	85 km/h	90 km/h
		4L	10 km/h	15 km/h	25 km/h	45 km/h	45 km/h

Safe driving hints

Important

These items are listed as a safety reminder to you. The appropriate section of this handbook should be referred to for a more detailed explanation.

Carbon monoxide

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

Seat belts

Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others in the vehicle. In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Maintenace Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

Anti-theft ignition steering lock

DO NOT turn the ignition switch away from the ON position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.

Never remove the key while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative.

Brakes

Driving through water may affect performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.

Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal which causes interference with normal pedal movement.

Also your seat should be positioned so that your feet can rest on the floor under the pedals.

Power assisted brakes

Power assisted brakes which are fitted to your Rodeo utilise vacuum from the engine when it is running. Never let the vehicle run down steep grades without the engine running. **Never** coast with the engine switched off.

Loose articles

Do not leave a loose load or articles inside the passenger compartment. Stow articles in the luggage compartment and tie down if necessary.

Petrol fumes

Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay.

Parking

When leaving your vehicle unattended:

1. Apply the parking brake. (Refer to page 28).
2. Place transmission selector in Reverse.
3. Turn key to LOCK position and remove key.
4. Shut windows and lock all doors.

Tyre traction

A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.

Cooling system

If the cooling system is hot, the radiator cap **must not** be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. Before doing this cover the cap with an old rag or cloth to avoid possible scalding.

Maintenance for Safety

The following items require regular attention in the interests of safety. If anything goes wrong with any one of them, an authorised GMH Dealer will help you.

- BRAKES.
- HORN.
- ALL LIGHTS.
- REAR VISION MIRRORS.
- SEAT BELTS.
- GLASS AREAS.
- EXHAUST SYSTEM.
- WINDOWS
- STEERING AND WHEEL ALIGNMENT.
- WINDSHIELD WIPERS & WASHERS.
- TYRES.
- SUSPENSION.

Before driving your vehicle

Driver checklist

Before entering vehicle

1. See that windows, mirrors and lights are clean.
2. Visually note inflation condition of tyres.
3. Check that area to rear is clear if about to back up.
4. Check that all lights work.
5. Look for fluid leaks.

Before Driving Off

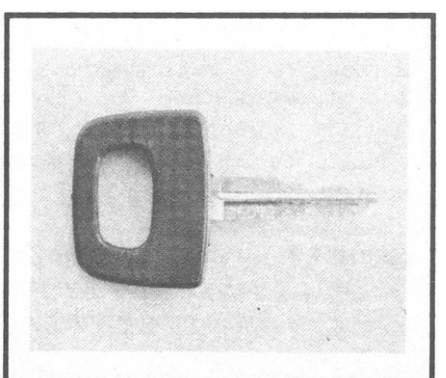
1. Lock all doors.
2. Adjust the seat.
3. Adjust inside and outside mirrors.
4. Fasten seat belts.
5. Check that warning lights work as key is turned to ''ON''.
6. Check all gauges.
7. Release parking brake and see that ''Brake'' light turns off.
8. Be sure you understand your vehicle and how to operate it safely.

Operation of controls

Keys

The code number of each key is stamped on the key. Record the key numbers and keep the numbers in a safe place such as your wallet, NOT IN THE VEHICLE.

In the event the original keys are lost, duplicates can be made by your dealer using the key code information.

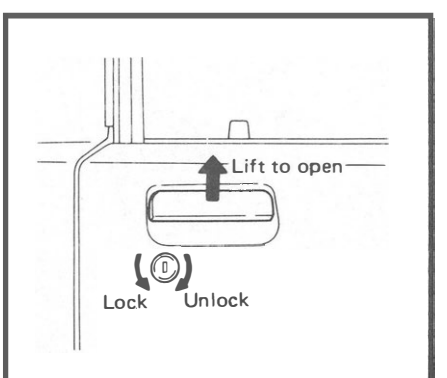


Door locks

Doors may be locked from outside the vehicle by inserting the ignition key into the door key lock and turning. To unlock, turn in the counterclockwise direction for the left door; clockwise for the right door. Reverse direction to lock. To lock doors from inside the vehicle, push lock button down. To open the door from inside, unlock the knob and pull the inside handle.

The doors can also be locked from outside without using the ignition key by pushing in on the lock knob and closing the door with the door outside handle pulled.

As a standard safety feature, the doors have overriding door locks. When the lock is locked, the door latch mechanism is inoperative, preventing inadvertent opening of the door by movement of the inside handle.



The KB series have a lockable fuel filler door or cap which can be unlocked, with the ignition key. After refuelling check to be sure the fuel filler cap is locked properly.

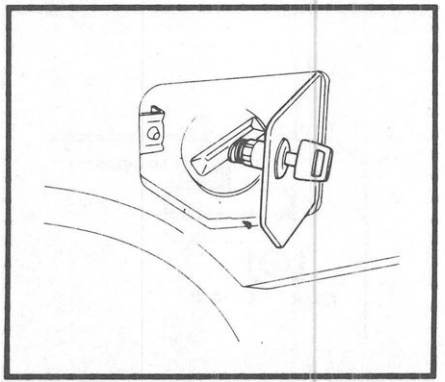
Seats

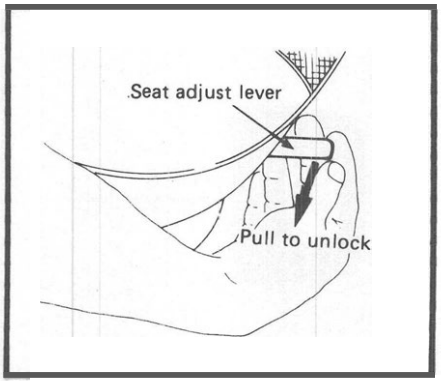
The entire seat assembly can be moved forward or rearward for the most comfortable position. Pull sideways on the lever, located at the front right end (or left end) of the seat, to release the seat adjuster lock so the seat assembly can be moved forward or rearward as desired.

CAUTION: Do not adjust a manually operated driver's seat while the vehicle is moving — the seat could move unexpectedly, causing loss of control.

Seat Inclination (where fitted)

Front seat back inclination angle can be adjusted by raising adjust lever on door side of seat.





Inside rearview mirror

To raise or lower, grasp mirror and exert sufficient pressure by pushing or pulling to move up or down.

Day time: Drive with lever pushed down.
At night: Drive with lever up, so that the glare proofed mirror protects your eyes against light from vehicles behind.

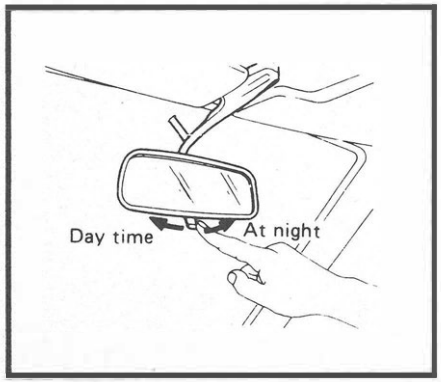
Dome Light (where fitted)

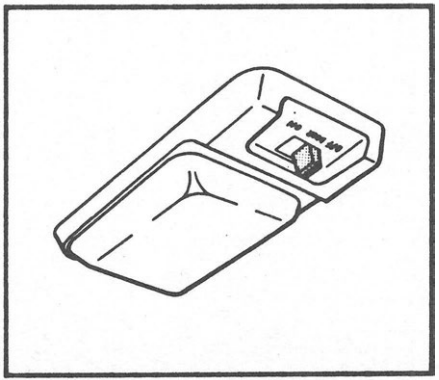
The dome light is operative at any starter switch position.

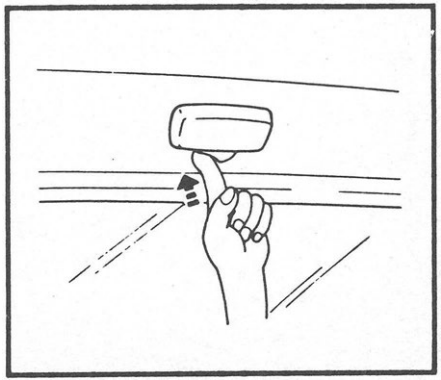
"OFF" The light remains out.
"DOOR" The light turns on when either front door is opened.
"ON" The light turns on regardless of the door position.

Dome Light (where fitted)

The switch is built into the light housing and has ON and OFF positions.







Seat belts

Releasing belts

To release all belts, simply depress the release button located in the centre of the buckle.

Care of seat belts

Keep the belts clean and dry. Clean with a mild soap solution and lukewarm water. Keep sharp edges and damaging objects away from the belts.

Periodically, inspect the belts, buckles and anchorage points. Damage or fraying that could lessen the effectiveness of the system should be eliminated by replacing the belt assemblies. Do not bleach or dye the belts since this can cause severe loss of strength as also will contamination of the webbing with polishes, oils or chemicals — particularly battery acid.

Using seat belts

Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others using the vehicle.

IMPORTANT: Don't use belts that are twisted — untwist them before making any adjustments and be sure that they contour around the body comfortably when adjustments are complete.

(Refer to the following pages for important instructions.)

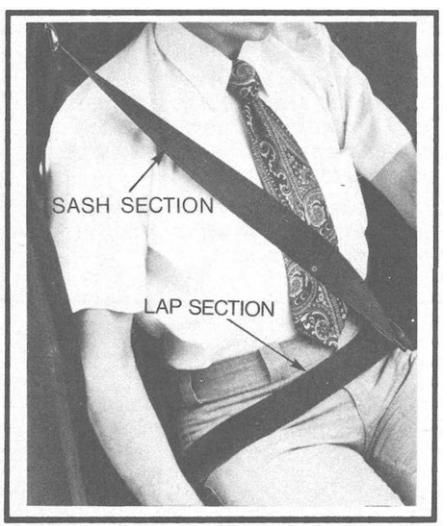
Lap/sash combination belt

A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.

Emergency locking retractor type

This type of seat belt allows the wearer to move bodily while the seat belt is fastened. It is also dual sensitive.

The first way the locking mechanism is activated is by sudden changes of vehicle speed or vehicle direction, as in the case of firm brake application or vehicle impact during an accident. This phase of the retractor mechanism's operation can be tested by allowing the body to be restrained only by the belt during firm application of the vehicle brakes, at between 2-5 km/h (brisk walking speed) under safe conditions.



The belt should lock immediately, stopping all belt movement. The second way the locking mechanism is activated is by a sudden extension of the belt from the retractor housing. This phase of the retractor mechanism's operation can be tested by holding the belt tightly and giving it a sudden firm jerk. The retractor mechanism should lock immediately, stopping all belt movement.

These checks should be carried out regularly.

WARNING: No modification or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

Tongue restrictor

This belt system incorporates a tongue restrictor which can be moved along the belt to locate and hold the tongue in any desired position.

WARNING: The positioning of the tongue restrictor must never interfere with or stop the belt from fully retracting.

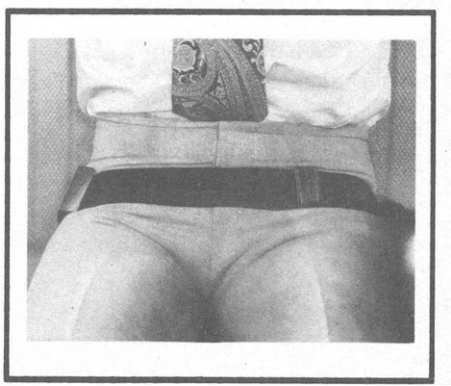
Belt adjustment

1. Adopt a satisfactory seating position.
2. Bring the metal tongue across the body and snap home the Tongue into the Buckle.
3. After fastening, settle the belt by running a hand under the belt, starting at the outer hip area, then across to the tongue and up the sash section. This will feed back unwanted belt length to the retractor.
4. Finally check the fit and adjustment.

Lap type belts

Belt adjustment

1. Adopt a satisfactory seating position.
2. Bring the Tongue Adjuster across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm low position across the pelvis is essential in order that the force exerted by the lap belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.



To Lengthen — Tilt the Tongue Adjuster and pull the belt to the right of the finger grip bar.

To Shorten — Tilt the Tongue Adjuster and use the serrated Finger Grip Bar to pull the belt through the Tongue Adjuster.

CHILDREN ABLE TO SIT UP should be belted with the regular seat belt. If the sash part rubs on the child's neck or face, move the child towards the centre of the vehicle. NEVER allow a child to stand or kneel on any seat.

Where children are carried without a child restraint if the seating position of the child is to be raised this is to be done only by means of a support which is retained by the seat belt.

ON NO ACCOUNT SHOULD A LOOSE CUSHION BE USED. THIS COULD RESULT IN SERIOUS INJURY IN THE CASE OF VEHICLE COLLISION.

Belt stowage

When not in use the belts should be kept with the tongue latched into the appropriate buckle.

AUSTRALIAN DESIGN RULES:

WARNINGS

Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.

It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.

Belts should not be worn with straps twisted.

Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.

No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

The positioning of the tongue restrictor must never interfere with or stop the belt from fully retracting.

Section 2

Starting and operating

Hot air intake system (Petrol engine)

When the ambient temperature is around 15°C or lower, the hot air intake valve selector lever on the air cleaner duct should be set in position ''W'' for intake of hot air to improve fuel combustion while the engine is cold.

When the ambient temperature is around 15°C or above, the selector lever should be set to position ''S''. At those times of the year when it can be 15°C and above during the day and fall to well below 15°C at night it is recommended that the lever be left at ''W'' when operating under these conditions.

Exhaust gas warning

Carbon monoxide poisoning

Exhaust gases contain carbon monoxide which can cause unconsciousness and even death.

You could breathe the gases in if the exhaust system on your vehicle is faulty.

Have the vehicle checked thoroughly each time it is serviced. If you notice a change in exhaust noise, or if the back of your vehicle is damaged, take it to your GMH Dealer for inspection.

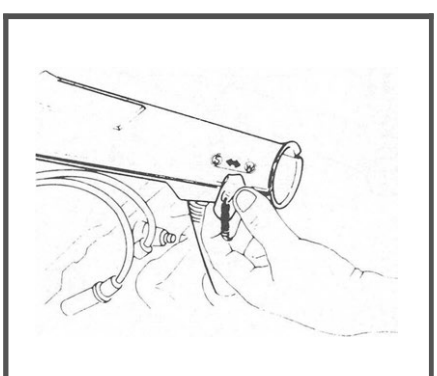
If you must drive with a faulty exhaust, drive with all the windows open.

Danger

Don't ever sit in a parked vehicle with the engine running for any length of time.

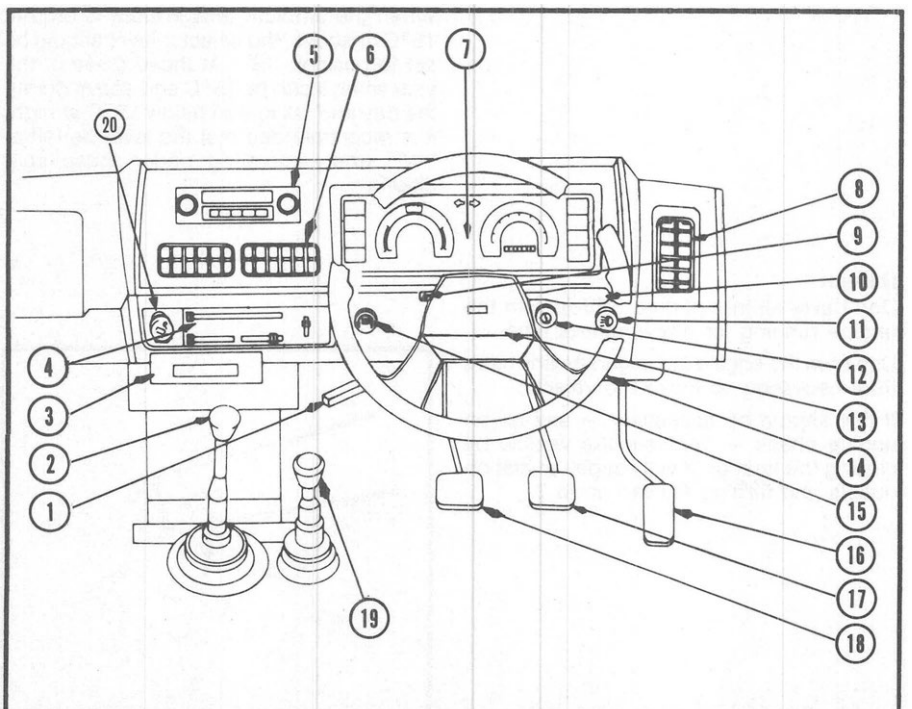
Don't run the engine in the garage any more than necessary to move the vehicle.

If this should be necessary — say for an engine check — ventilate the vehicle by closing the heat or flow through ventilation outlets and turning the fan on to 3.



Starting and operating

Controls



1. Parking brake lever
2. Transmission gearshift lever
3. Ash tray
4. Heating & ventilation controls
5. Radio
6. Centre ventilator grille
7. Instrument & warning light panel
8. Side ventilator grille
9. Four-way Hazard warning flasher switch
10. Turn signal switch, windshield wiper, washer, high and low beam switch
11. Light switch
12. Starter switch
13. Horn button
14. Steering wheel
15. Idling control button (Diesel)
16. Accelerator pedal
17. Brake pedal
18. Clutch pedal
19. Transfer gearshift lever (4 x 4 model only)
20. Cigarette lighter

Starter switch

The starter switch has five positions as shown.

LOCK : The key may be inserted and removed only when the switch is in this position.

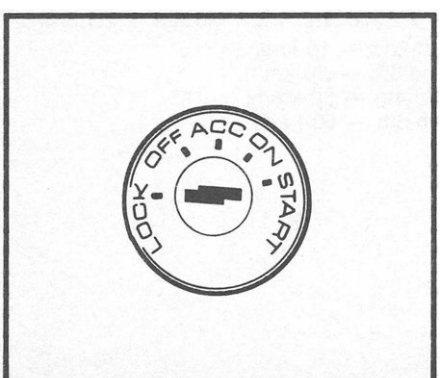
OFF : The engine will stop with switch in this position.

ACC : With the switch to this position, electrical circuit for accessories are energized.

ON : Switch in this position for driving.

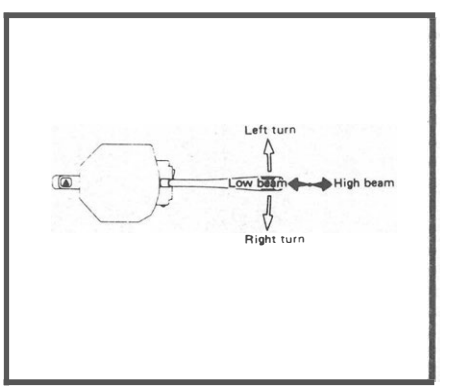
START : Moving the key into this position will start the engine. Releasing the key will alow it to return to **ON** position.

Note: **Do not keep the starter engaged for more than 15 seconds (Petrol Engine) or 30 seconds (Diesel Engine).**



High/Low Beam

With the headlights on, pull the lever towards you until you hear a click, then release it. The headlights will change from low-beam to high-beam or from high-beam to low-beam. When the high-beams are on, a blue light located on the instrument panel will glow. It is also possible to flash the high-beam for signalling purposes, with the headlight switch turned on or off, by moving the lever towards you. A light resistance will be felt at the flash position. Further movement towards you will cause the dip switch to operate. The lights will remain on high-beam as long as the lever is held.



Turn Signals

The lever which controls the turn signal switch (combination headlight beam control switch lever) is located on the right side of the steering column immediately under the steering wheel. The lever is moved upward to signal a left turn and downward to signal a right turn. Lamps on the front and rear of the vehicle transmit this signal to other motorists and pedestrians.

In a normal turning situation such as turning a corner, the turn signal is cancelled automatically after the turn is completed. However, in some driving manoeuvres, such as changing lanes on an expressway, the steering wheel is not turned back sufficiently after completing the turn to automatically cancel the turn signal. In such manoeuvres the driver should return the lever to the neutral or cancelled position when the turn is completed.

A green light on the centre part of the instrument panel flashes to indicate proper operation of the right and left turn signal lamps. If the indicator lamp remains on and does not flash, check for a defective signal lamp bulb. If the indicator fails to light when the lever is moved, check the fuse and indicator bulb.

Lane change signal
For convenience, such as changing lanes, you can flash the turn signal by moving the lever part way (to the first stop) and holding it there. The lever will return to the horizontal when you release it.

Starting and driving precautions

Shifting precautions
CAUTION: On a diesel engine model, a caution label-speed range is attached to the front part of door inside panel on the driver side. For best results, it is strongly advisable to confine your speed in each gear to the limit recommended in the caution label-speed range.

- Always start in low gear, avoid racing the engine.
- Shift to next lowest gear for extremely hard pulls at low road speed.
- Do not over speed engine when shifting down to next lower gear.
- Use third gear at slow speeds (less than 50 km/h) when driving in stop-and-go traffic for improved vehicle performance during acceleration and when descending steep grades.
- Never shift into reverse gear until vehicle is completely stopped.
- Confine your speed to the following recommendations.
- For normal acceleration, follow the following steps.

4 x 2 Models
Shift into second gear at about 15 km/h, into third gear at about 30 km/h and into fourth gear at about 50 km/h.

Use fifth gear for highway cruising above 75 km/h. Do not continue to use fifth gear where large throttle openings or full throttle is necessary (except momentarily) as poor fuel economy will result.

4 x 4 Models
In 2H or 4H, shift into second gear at about 15 km/h, into third gear at about 30 km/h and into top gear at about 50 km/h.

In 4L, shift into second gear at about 8 km/h, into third gear at about 16 km/h and into top gear at about 27 km/h.

IMPORTANT:
Petrol Engine Models
To ensure minimum exhaust emissions the following shift speeds are recommended:
(4 x 2 Models, 4 x 4 Models in 2H or 4H)
1st-2nd — 15 km/h.
2nd-3rd — 30 km/h.
3rd-4th — 50 km/h.
4th-5th — 60 km/h.

Starting the engine

1. Apply the parking brake.
2. Place transmission in neutral and hold clutch pedal to the floor throughout the starting procedure. (Select the proper gear position before releasing the clutch pedal. See "Starting and Driving Precautions".)
3. Depress accelerator pedal and activate starter as outlined below for different conditions.
4. Start engine as outlined below for different conditions.

Normal Weather — Above about 0°C
(Petrol Engine)

1. With the key turn the starter switch clockwise, checking to see if the oil pressure indicator light and generator indicator light turn on.
2. Crank the engine by turning the starter switch fully clockwise. Release the key as soon as the engine starts. The starter switch will return automatically to "ON" position.
3. When the engine starts, depress the accelerator pedal part way down and check to be sure that the oil pressure indicator light and generator indicator light go out.

(Diesel Engine)

1. Turn the starter key to ON position, checking to see if the oil pressure indicator light, generator indicator light, filter indicator light and glow plug indicator light turn on.
2. As soon as the glow plug indicator light has gone off, fully depress the accelerator pedal and clutch pedal to start the engine.
3. Crank the engine by turning the starter switch fully clockwise. Release the key as soon as the engine starts. The starter switch will return automatically to ON position.
4. When the engine starts, depress the accelerator pedal part way down and check to be sure that the oil pressure indicator light and generator indicator light go out.
   If necessary to achieve a smooth idle turn the idling control button to clockwise until the engine reaches normal operating temperature. Turn the idling control button to home position after the engine has thoroughly warmed up.

Cold Weather — Below about 0°C, or after vehicle has been standing idle for several days.

(Petrol Engine)

1. Pump the accelerator pedal 2 to 3 times and release it.
2. Depress the clutch pedal all the way to the floor, hold and crank the engine by turning the starter switch fully clockwise.
3. When the engine starts, allow it to run at fast idle setting in NEUTRAL for approximately 20 to 30 seconds to facilitate warming-up.

NOTE: If the engine does not start due to carburettor flooding, continue to operate the starting motor with the accelerator pedal depressed to floor.

(Diesel Engine)

To start, follow the steps applied for starting cold engine under normal weather.

Hot Engine

1. Depress accelerator pedal slowly, and hold it to floor, turn the starter switch clockwise — release when engine starts.
2. After starting the engine, release accelerator pedal.

If the engine fails to start with initial cranking

IMPORTANT: Do not keep the starter engaged for more than 15 seconds (Petrol Engine) or 30 seconds (Diesel Engine) at a time. Wait 30 seconds and try again.

NOTE: If the starting motor has been operated continuously but the engine did not start, allow 30 seconds before attempting to restart.

Stopping the engine

Turn the starter switch to OFF position.

NOTE OIL PRESSURE INDICATOR LIGHT AND/OR GENERATOR INDICATOR LIGHT

Generator light should be off unless engine is idling slowly. The oil pressure indicator light should go out. Be certain light is off before continuing; if still on, stop engine and determine fault.

CHECK TEMPERATURE GAUGE

If the needle moves to the "H" hot end of the gauge, stop the engine until the cause of overheating is determined.

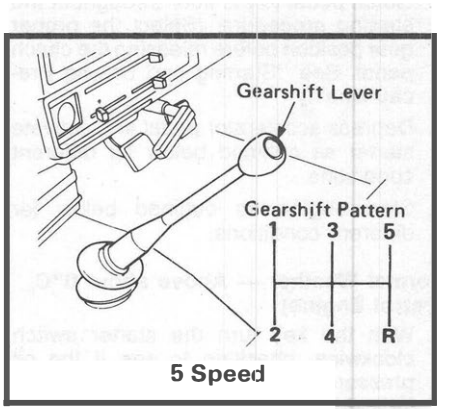
Manual transmission

REMINDER: Before descending a steep or long grade, down a mountain or hillside, reduce speed and shift into a lower gear. Under such conditions, use the brakes sparingly to prevent them from overheating which reduces brake effectiveness.

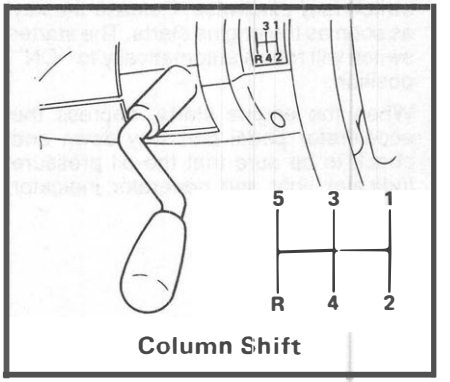
Gearshift lever

The gearshift pattern is provided on the left side face of the steering column behind the steering wheel. (On floor shift control model, the gearshift pattern is provided on the shift-lever knob.) The back-up lights turn on when shifted into reverse gear.

The transmission has 5 fully synchronised forward speeds.



5 Speed



Column Shift

Idling Control Knob — Diesel

Turning the knob clockwise (in direction of arrow) after cold starting of the engine will increase idling speed hereby facilitating quick normalization of the engine. Always drive with the button returned to home position. (See engine starting procedure.)

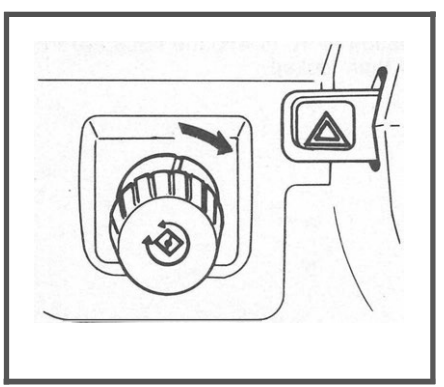
Part time four wheel drive (4 x 4 Models)

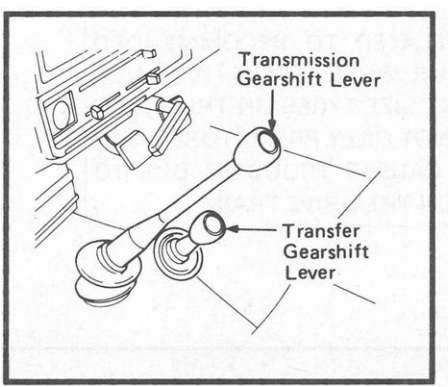
Transfer case operation

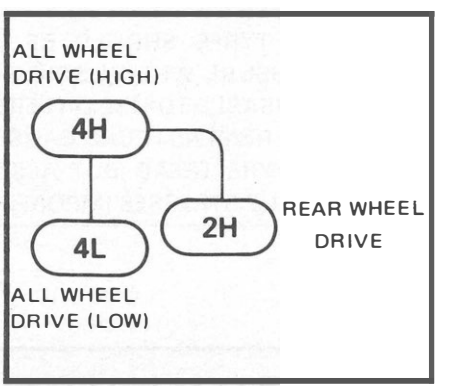
The transfer case for conventional (Part-time) four wheel drive vehicles provides that the driver may select two wheel or four wheel drive by shifting the Transfer Gearshift Lever.

The transfer shift lever positions that appear on the shift lever knob are shown below.

Note: When the lever is in the 4H or 4L position the 4WD indicator light on the instrument panel will glow.







TRANSMISSION RANGE SHIFT PATTERN

AUTO LOCKING FRONT HUB 4X4

TRANSFER CASE SHIFT CONTROL

2H — HIGH RANGE — NORMAL TWO WHEEL DRIVE

4H — HIGH RANGE — ALL FOUR WHEELS DRIVING

4L — LOW RANGE — ALL FOUR WHEELS DRIVING

4L AND 4H FOR LOW TRACTION CONDITION ONLY (MUD, SNOW OR SAND). NOT RECOMMENDED FOR DRY PAVEMENT.

THE TYRES SHOULD BE INFLATED TO RECOMMENDED PRESSURE WHEN USING FOUR WHEEL DRIVE. IT IS NOT ADVISABLE TO USE DIFFERENT SIZE TYRES ON THE FRONT AND REAR AS IT CAN CAUSE NOT ONLY PREMATURE WEAR OF TYRE TREAD BUT ALSO CAUSES TROUBLES DUE TO UNDUE STRESSES IMPOSED ON THE DRIVE TRAIN.

AUTOMATIC LOCKING HUB

With this equipment, 'lock to free' and vice versa can be made by just operating the transfer shift lever in the cabin without alighting from the vehicle.

TO LOCK

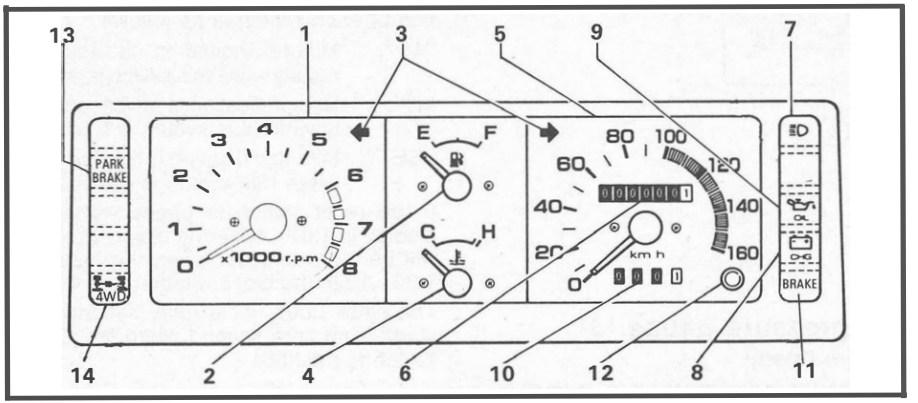
1. Stop the vehicle.
2. Shift transfer lever to 4H or 4L.
3. Start the vehicle. This automatically locks the hubs.
4. Once the hubs have been locked, they will remain locked even if the transfer lever is shifted from 4L or 4H into 2H as long as the vehicle runs in the same direction.

TO FREE

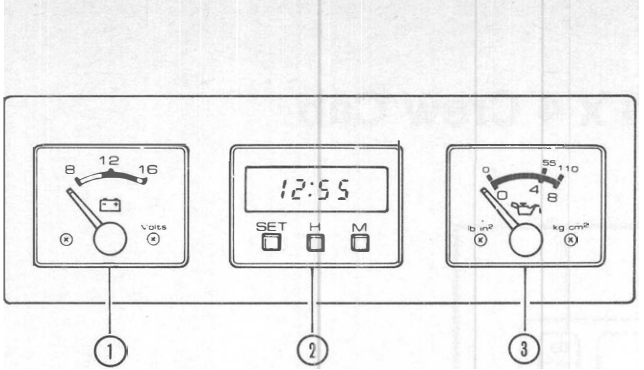
1. Stop the vehicle.
2. Shift transfer lever to 2H.
3. Move the vehicle in the opposite direction slowly for at least one metre.

When you move the vehicle in the opposite direction at 4L or 4H, the hubs are freed, and then locked.

Instrument Panel — LS & DLX 4 x 4 Crew Cab



1. Tachometer
2. Fuel Gauge
3. Turn Signal Indicators
4. Temperature Gauge
5. Speedometer
6. Odometer
7. High Beam Indicator
8. General Charge Indicator
9. Oil Pressure Indicator
10. Tripmeter
11. Brake Warning Light
12. Tripmeter reset knob
13. Park Brake Indicator
14. 4WD Indicator (4 x 4 models only)



Voltmeter '1' (where fitted)

The voltmeter indicates the condition of the electrical charging system. Normally the needle will remain in the white band operating area of the dial.

If the needle moves outside this area the electrical charging system will require checking; items such as the battery, voltage regulator, drive belt or wiring and connections could be affected.

Oil pressure gauge '3'

(where fitted)

The gauge indicates the pressure of oil in the engine. If the needle does not deflect at all or if it gives an erratic indication, check the oil level. If the level is normal have the lubricating system checked immediately.

Electrical digital clock '2'

(where fitted)

Time is displayed when the ignition switch is in the "ON" position. To reset the time, push the switches as necessary. The function of each switch is as follows:

"M": Minute indication is advanced rapidly while this switch is pushed.

"H": Hour indication is advanced rapidly while this switch is pushed.

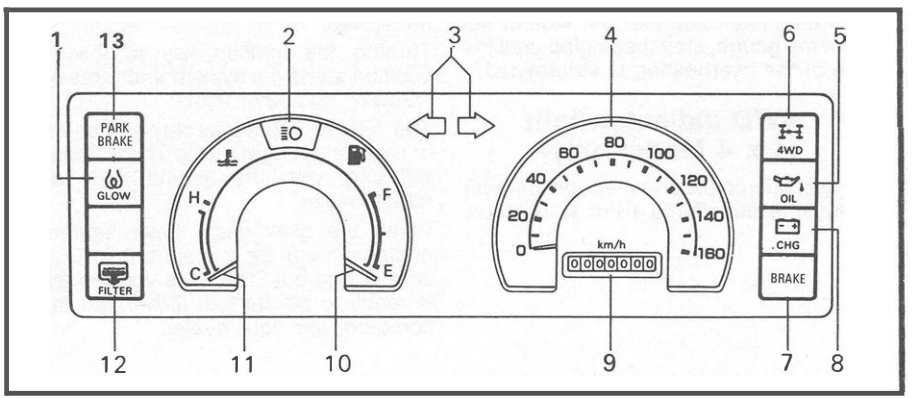
"SET": Minute indication is reset to "OO" when this switch is pushed.

If the reset switch is pushed when the display is 1:01 - 1:29, the clock reset hour will be reset to 1:00, when the display is 1:30 - 1:59, the clock will be reset to 2:00.

The clock does not display seconds, but starts from zero second when the "SET" switch is pushed.

Instrument Panel — Base & DLX Models except DLX 4 x4 Crew Cab

Instruments and Controls



1. Glow indicator (Diesel only)
2. High beam indicator
3. Turn signal indicators
4. Speedometer
5. Oil pressure indicator
6. 4WD indicator (4 x 4 models only)
7. Brake indicator
8. Generator charge indicator
9. Odometer
10. Fuel gauge
11. Temperature gauge
12. Fuel filter water indicator light (Diesel only)
13. Park brake indicator

Speedometer

The speedometer hand indicates vehicle speed in kilometres per hour.

Odometer — The group of seven figures in the speedometer upper centre section indicates the accumulated kilometres travelled.

Fuel gauge

The fuel gauge is wired through the ignition switch and indicates the level of fuel in the tank when the ignition switch is turned on.

Oil pressure indicator light

This unit indicates oil pressure in the engine lubrication system. Proper indicator interpretation is given under "Starting the Engine".

Generator indicator light

The generator indicator light indicates generator operation. Normal operation is with the light off. Refer to "Starting the Engine" for complete indicator interpretation.

Brake indicator light

The brake indicator light indicates the level of brake fluid in the reservoirs. With the starter switch in "ON" position, the bulb lights up when the brake fluid in the reservoirs is lower than the specified level, cautioning the driver that brake fluid needs to be replenished.

NOTE: As a check on the condition of the Generator, Oil Pressure and Brake Indicator Lights, the bulbs will light up when the starter switch is in "ON" position but before the engine is started, and while the engine is being cranked, and then should go out as engine speed is increased.

Parking brake indicator light

With the starter switch in "ON" position the bulb lights up when the parking brake lever is pulled, cautioning the driver that the rear wheels will not rotate.

Temperature gauge

The centre area of the water temperature gauge is indicated by a shaded area. When the gauge needle is in the shaded area, normal operating temperature is indicated. However, if the needle moves beyond the centre area mark into the "H" side or hot area of the gauge, stop the engine until the cause of the overheating is determined.

4WD indicator light (4 x 4 Model only)

This light will come on when the transfer shift lever is shifted into 4H or 4L position.

Glow indicator light (Diesel only)

Your diesel engine has a special starting system. Small heating elements, called "glow plugs", warm part of the engine for improved starting. The "GLOW" indicator light tells you when the engine is ready to be started.

Turning the ignition key to the "ON" position starts the system and turns on the "GLOW" indicator light.

The "GLOW" light may stay on a short time or may go out right away. The waiting time will vary with the engine and coolant temperatures.

When the glow plugs have heated the engine enough for it to start, the "GLOW" light will go out. This tells you the engine is ready to be started. If the light fails to come on, see your dealer.

Fuel filter water indicator light (Diesel only)

Under certain circumstances water may be taken into the fuel tank, and to prevent water from reaching the vital parts of the fuel system, a water separator is installed. When the level of water trapped within the water separator reaches the specified level, the light turns on.

If the light turns on and remains on with the engine running, it indicates the need for draining water separator. (Refer Section 6.)

Light switch

To turn on the clearance lamps, tail lamps, licence plate lamps, and instrument panel lamps, pull the light control switch knob part way out. To turn on the headlamps in addition to the above mentioned lamps, pull the knob out to a definite stop.

NOTE: For operation of hazard flasher see Section "In Case of Emergency".

Windshield wipers and washers

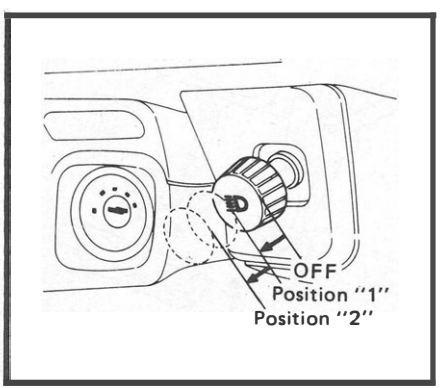
The combination switch located on the right of the steering column operates at 3 speeds:

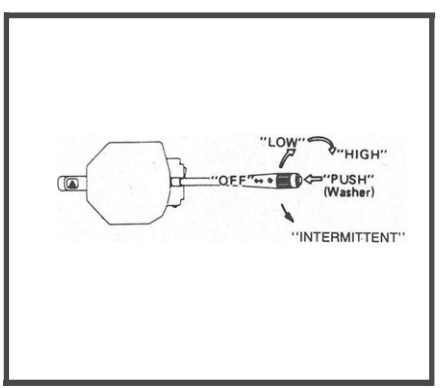
- Low Speed
- High Speed
- Intermittent.

Turn the lever clockwise to the first stop for LOW wiper speed and to second stop for HIGH.

Intermittent is gained by turning the lever anticlockwise from the off position.

To operate the windshield washer, depress the switch knob.





Floor controls

Service brakes

The service brake system is designed for braking performance under a wide range of driving conditions even when the vehicle is loaded to its full rated vehicle load.

CAUTION: Driving through deep water may wet the brakes and adversely affect brake performance so the vehicle will not slow down at the usual rate, and may pull to the right or left. Applying the brakes lightly will indicate whether they have been so affected. To dry them quickly, lightly apply the brakes while maintaining a safe forward speed with an assured clear distance ahead and to the sides until brake performance returns to normal.

- See your dealer if pedal height does not return to normal, or if there is a rapid increase in pedal travel, which could be a sign of brake trouble.
- Also see your dealer if the parking brake needs adjustment.

NOTE: "Riding the brake" by resting your foot on the brake pedal when not intending to brake can cause abnormally high brake temperatures, excessive lining wear and possible damage to the brakes.

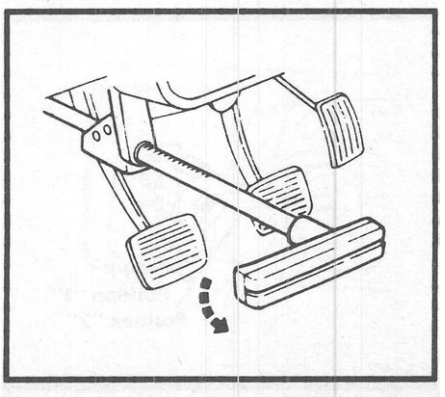
Self-adjusting brakes

- The brakes on this vehicle are self-adjusting: discs on front and drums on rear. They have been designed so that periodic brake adjustment is not required.
- The front brakes adjust themselves each time the brakes are firmly applied.
- The rear brakes adjust themselves each time the parking brake is firmly applied.
- If the brake pedal goes down further than normal, it may be due to a lack of adjustment. To find out if this is the case, apply the parking brake firmly several times with the vehicle stationary.

Parking brake

A ratchet type hand lever parking brake control is mounted to the left of the steering column under the instrument panel.

- To set parking brake, pull lever. (The parking brake lever travel is normal if it is within 13-14 notches.)
- For maximum holding power, depress regular brake pedal at the same time.
- To release the brake, turn the lever counterclockwise slightly with the catch pulled and then push the lever forward securely.
- Never drive vehicle with parking brake set as this may overheat or otherwise damage rear brakes.



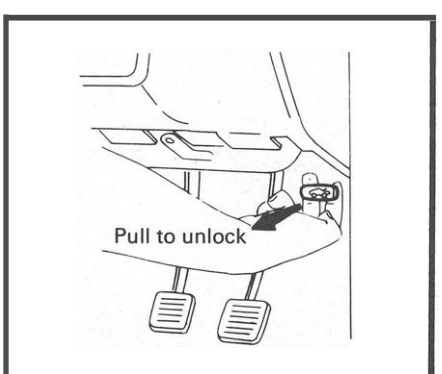
Clutch pedal

A clutch pedal is used to engage or disengage the clutch, thereby connecting or disconnecting the engine from the transmission and driveline to rear wheels. When the pedal is fully extended the clutch is engaged, driving the transmission and the rear wheels.

CAUTION: Do not drive with your left foot resting on the clutch pedal, or premature wear of clutch facing will result, causing clutch slippage or juddering.

Engine hood release

To raise the engine hood, unlock the safety catch by pulling the release lever under the instrument panel (drive side) and raise the hood all the way up so that it stays in position. Be sure support rod end engages hole on head reinforcement. To close, remove the support rod end from the hole on the hood reinforcement, put the support rod back into the clip on the deflector panel. Then, lower the engine hood to a horizontal level and push down on the front until it is locked in position.



Radio (where fitted)

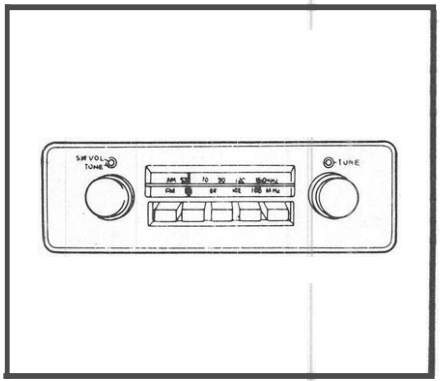
(1) OFF - and - ON switch and volume control knob:
The power switch is of the push button type. Turn the knob to control volume.

(2) Tone control:
Turn the rear ring of the volume control knob to control tone.

(3) Tuning knob:
Turn the knob to tune to the desired station.

(4) Tuning buttons:
Push the button to tune in to the preset station. Tuning buttons can be set in the following manner:

1. Pull out the button.
2. Tune in to the station desired by turning the manual tuning knob.
3. Push in the tuning button carefully.



Antenna:
Pull out the antenna to gain sensitivity.

Ventilation

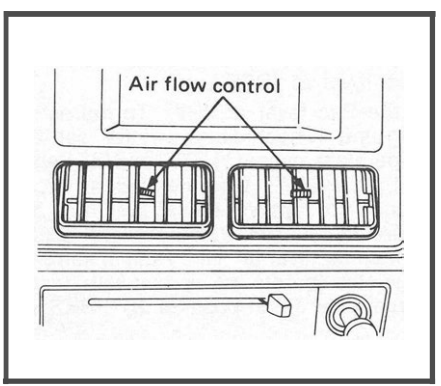
Intake of outside air

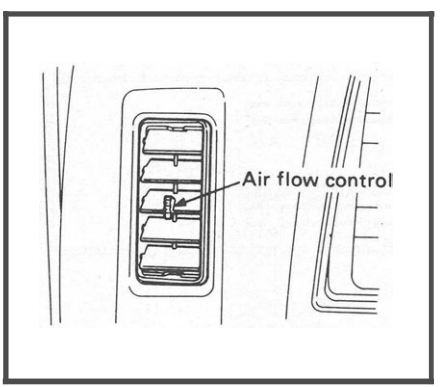
Air is delivered through the centre vent and side vent on each side when the air source lever is placed in "FRESH" position with the select lever in "VENT" position.

Controlling direction of air flow

- **Centre vent**
  The centre vent is provided on the instrument panel. Vertical direction of air flow is controlled by pivoting the entire grille up or down. The knobs at the grille control the direction of air flow horizontally.

- **Side vent**
  The side vent is provided on each end of the instrument panel. Horizontal direction of air flow is controlled by pivoting the entire grille sideways. The knob at the centre part of the grille controls direction of air flow vertically.





Heater-defroster

Fan lever
The fan lever (OFF-HI) provides speed control of the blower fan in all selector lever positions except OFF.

Temperature lever
The temperature lever regulates the temperature of the air entering the passenger compartment in all selected lever positions.

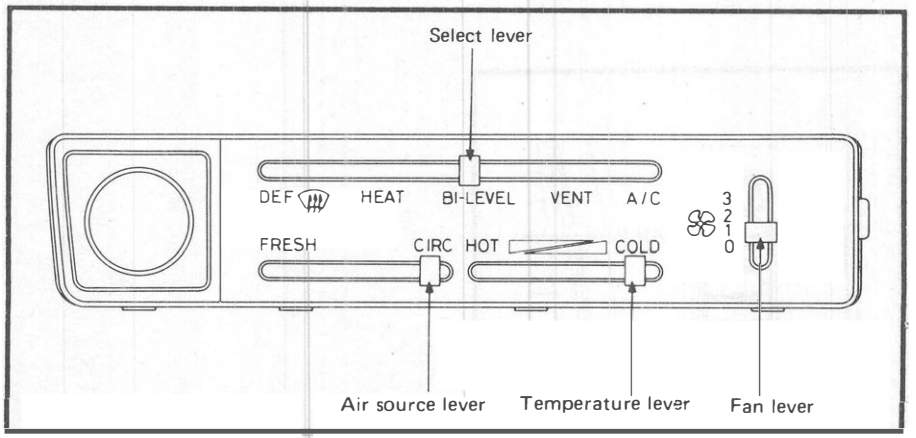
Select lever
The air select lever regulates the air flow to the heater and defroster outlets.

OFF — In this position the blower does not operate. However, when the vehicle is moving, air will enter the passenger compartment through the heater outlet.

BI-LEVEL — Outside air is directed out of the upper outlets and the heater outlets. This position provides comfort and keeps the windshield clear under low fogging conditions.

HEAT — Outside air is delivered from the heater outlets with a small amount from the defroster outlets. This position is used for most winter driving.

DEF — Outside air is delivered from the defroster outlets with a small amount from the heater outlets. To defog the windshield in summer set the temperature lever at "COLD" and the selector lever at "DEF". Set the fan lever at "HI". To defrost or defog the windshield in winter set the temperature lever at "HOT" and the selector lever at "HEAT". Operate system for 30 seconds to remove humid air from the system, then set the selector lever at "DEF" and the fan lever at "HI".



Ventilating
To draw outside air directly into the vehicle, set the Temperature lever at "COLD" and the Select lever at "VENT". Set the fan lever for desired air flow. With the air source lever in position of "FRESH" the outlet grille is adjustable.

Heating
Set the Temperature lever at "HOT" and the Select lever at "HEAT". Inlet air flow temperature may be varied by moving the Temperature lever between "COLD" and "HOT". Set the fan lever for desired air flow. Set the air source lever in position "FRESH".

Windshield defrosting and defogging
To defog the windshield in summer set the Temperature lever at "COLD" and the Select lever at "DEF".

Set the Fan lever at "HI". To defrost or defog the windshield in winter set the Temperature lever at "HOT" and the Select lever at "HEAT". Operate system for 30 seconds to remove humid air from the system, then set the Select lever at "DEF" and the Fan lever at "HI". Both in summer and winter operate the system with the air Source lever set in position of "FRESH".

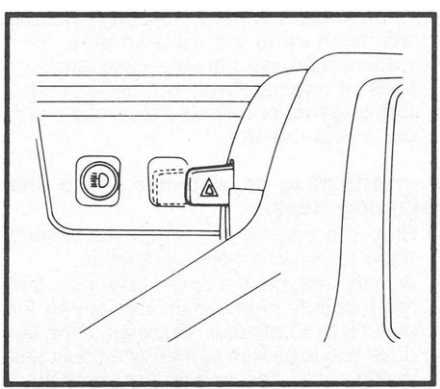
Bi-level
This position is used to divert heated air to the floor area. Even though the temperature lever can be set in any position between COLD and HOT, it is best to set the lever in the intermediate position when the Select lever is set for Bi-Level so that optimum temperature control can be achieved even in winter, provided the sun is shining.

The fan lever can be set in any position. Operate the system with the air source lever set in position of ''FRESH''.

Section 3
In case of emergency

Four-way hazard warning flasher

- Use the warning flasher to warn other drivers any time your vehicle becomes a traffic hazard, day or night.
- Turn on the hazard warning flasher, with engine ignition off or on, by pulling out the button located on the left side of the steering column behind the steering wheel.
- To cancel the flasher, push the button in.



Emergency starting

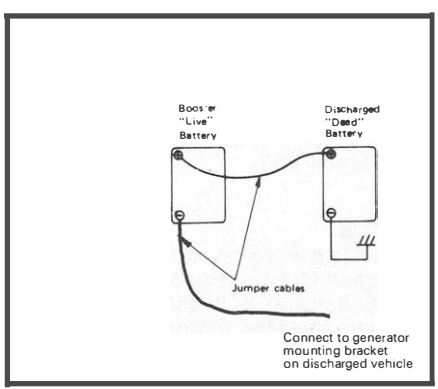
Jump Starting With Auxiliary (Booster) Battery

- To start the vehicle when the battery is discharged, use a single auxiliary battery of the same nominal voltage, i.e. 12 volts, as the discharged battery with suitable jumper cables.
- Make connections as set out below under "Jump Starting With Auxiliary (Booster) Battery" to lessen the chance of personal injury or property damage.

CAUTION: Never expose battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact skin, eyes, fabrics, or painted surfaces — fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Wear eye protection when working with battery.

Both booster and discharged battery should be treated carefully when using jumper cables. Follow exactly the procedure outlined below, being careful not to cause sparks.

1. Set parking brake and place transmission in neutral. Turn off lights and other electrical loads.
2. Remove vent caps from both the booster and the discharged batteries. Lay a cloth over the open vent wells of each battery. These two actions help reduce the explosion hazard always present in either battery when connecting "live" booster batteries to "dead" batteries.
3. Attach one end of one jumper cable to the positive terminal of the booster battery (identified by a red colour, "+" or "P" on the battery case, post or clamp) and the other end of same cable to positive terminal or discharged battery. Do NOT permit vehicles to touch each other, as this could establish a ground connection and counteract the benefits of this procedure.
4. Attach one end of the remaining negative (–) cable to the negative terminal (black colour, "–" or "N") of the booster battery, and the other end to the generator mounting bracket (do not connect directly to negative post of dead battery) — taking care that clamps from one cable do not touch the clamps on the other cable. Do not lean over the battery when making this connection. Reverse this sequence exactly when removing the jumper cables. Reinstall vent caps and discard cloths as these may have corrosive acid on them.


Booster "Live" Battery
Discharged "Dead" Battery
Jumper cables
Connect to generator mounting bracket on discharged vehicle

CAUTION: Any procedure other than the above could result in: (1) personal injury caused by electrolyte squirting out of the battery vents, (2) personal injury or property damage due to battery explosion, (3) damage to the charging system of the booster vehicle or of the immobilised vehicle.
Do not attempt to jump start a vehicle having a frozen battery because the battery may rupture or explode. If a frozen battery is suspected, examine all fill vents on the battery. If ice can be seen, or if the electrolyte fluid cannot be seen, do not attempt to start with jumper cables as long as the battery remains frozen.

Push starting

- NEVER TOW the vehicle to start because the surge forward when the engine starts could cause a collision with the tow vehicle.
- When being pushed to start the engine, turn off all unnecessary electrical loads, turn starter switch to "ON", depress the clutch pedal and place the shift lever in high gear. Release the clutch pedal when speed reaches 15-25 km/h. Bumpers and other parts contacted by the pushing vehicle should be protected from damage during pushing.

Towing

Proper lifting or towing equipment is necessary, when lifting or towing the vehicle to prevent damage to it during any towing operation. Detailed towing information is available at your dealer and has been provided to tow truck operators responsible for movement of disabled or locked vehicles. However, in an emergency, a disabled or locked vehicle may be towed in the following manner:

- Fit the towing rope (safety chains or cables) in the locations as follows:

Front

Strut bar bracket

Rear

Shackle

CAUTION: Exercise extreme care, particularly when towing a vehicle with a rope hooked to the axle tube, to guard rear suspension and relative parts against shock load. In any case towing should be for a short distance only.

- When a need has arisen for towing your vehicle, release the parking brake and hold the transmission in neutral. It is important that the transmission and rear axle are in good operating condition to enable the vehicle to be towed.
- When towing a vehicle with trouble in the rear axle;
  It is necessary to tow the vehicle with the rear wheels lifted and to disconnect the propeller shaft, or to lift the rear wheels when towing a vehicle with transmission trouble.

In Case of Towing Four Wheel Drive Vehicles:

1. Shift the transfer case into "2H" position.
2. Hold the transmission in "Neutral" position.

Freeing vehicle from sand, etc.

If it becomes necessary to rock the vehicle to free it from sand, mud or snow, move the gear shift lever from second to reverse gear. Do not race engine. For best possible traction, avoid spinning wheels when trying to free the vehicle. Use of tyre chains is recommended for temporary assistance when traction is lost on ice or snow.

CAUTION: Wheel spin should not exceed 55 km/h as indicated on the speedometer. Unless care is taken in limiting rear wheel spin, one spinning wheel can reach excessive speeds, resulting in possible tyre disintegration or differential failure, which could cause personal injury or extensive vehicle damage.

Engine overheating

The following symptoms will become apparent if engine overheats.

- The coolant temperature gauge pointer will move up to the extreme right.
- Engine ping will become excessive.
- Loss of engine power will be noticed.
- Either steam or boiling water may squirt out of the radiator.

If overheating is detected, take the following steps.

- Stop the vehicle and open the engine hood to provide good ventilation.
- Run the engine at a speed (around 1,500 rpm) slightly higher than idle speed for about 5 to 10 minutes. However, if the fan drive belt is broken or if engine coolant is leaking, stop the engine immediately.

- Stop the engine and carefully remove the radiator cap.

CAUTION: To Remove the Radiator Cap When Engine is Hot;
Do not remove radiator cap while engine and radiator are still hot, because the cooling system will blow out scalding fluid and steam under pressure.
To prevent loss of coolant and avoid the danger of being burned, coolant level should be checked, and coolant added only when engine is cool.

To remove the radiator cap when engine is cool;

Slowly rotate cap counterclockwise to detent (DO NOT PRESS DOWN WHILE ROTATING). Wait until any residual pressure is relieved — as indicated by a hissing sound. After any hissing ceases, press down on cap while continuing to rotate counterclockwise.

Radiator pressure caps should be checked annually by a qualified mechanic for proper operation and replaced as required with the applicable type.

- Check coolant level and replenish with fresh water up to the level of the fill neck when the engine is cold.

Incorrect ignition timing, a loose fan drive belt, insufficient level of engine lubrication oil and/or engine coolant, radiator fins clogged up with foreign matter and radiator tubes blocked are possible causes of engine overheating. Determine the cause of trouble and correct as soon as possible.

When oil pressure indicator light comes on

- If the oil pressure indicator light comes on while engine is running, immediately stop engine.

CAUTION: Do not run the engine at high speed when the oil pressure indicator light is on, otherwise the engine may be damaged.

- Check the level of the engine oil and check for leakage of lubricating oil at the same time. Replenish with proper engine oil up to the specified level, if necessary, and restart the engine to see that oil pressure indicator light goes out. If the oil pressure indicator light does not go out even with sufficient level of lubricant in the crankcase, or lubricant is leaking, obtain assistance from your GMH dealer.

When charge indicator light comes on

- This indicates that the alternator is not generating. Immediately stop your vehicle and check for loose or broken fan drive belt. If loose, adjust belt tension. If the belt is found broken, or if the fan belt is not responsible for the trouble, have your GMH dealer inspect and correct the fault.

CAUTION: Driving under this condition will eventually discharge the battery. If fan belt is loose or broken, overheating of engine will result. DO NOT drive for an extended period of time if the charge warning light is on.

When an electrical device is inoperative

- If chassis electrical trouble is encountered without extreme damage to any electrical parts, check for burned out fuse, broken wire, poor connections or poor grounding and correct as necessary.

NOTE: The fuse box is located on the left side valance panel within the engine compartment.

CAUTION: When replacing a fuse be sure to use a fuse of the specified amperage. Never install a wire or similar for replacement as it may cause a fire hazard to the vehicle.

- If the cause of trouble cannot be located through the above checks and trouble persists, contact your nearest GMH dealer.

Trailer towing

If the trailer is equipped with over-run brakes the maximum Gross Combined Mass is 2400 kg. The trailer should not exceed 450 kg in weight.

Where driver initiated brakes are fitted the Gross Combined Mass is 2750 kgs.

Running-in period

It is best to drive your new Rodeo for 1500 kilometres before towing a load. If you must tow before this do not exceed 80 km/h on good roads. No heavy off road towing should be attempted before 1500 km.

Towbar loads

The load imposed on the towbar ball must be included in the maximum rear axle loading and the maximum loaded vehicle mass (Refer chart) unless a load equalising hitch is used which fully compensates for towbar ball load by restoring the towbar ball height to the unhitched position.

Ball load

The ball load should be in the range of 7% to 12% of the loaded trailer measured at towing ball operating height condition, (vehicle also laden) when towing tyre pressure should be adjusted to include tow ball load.

Safe trailer towing

- Your vehicle will handle differently with a towed load. It's a good idea to make a proper familiarization run.
- Have your vehicle correctly maintained.
- You should have an extended-arm mirror on both sides of the vehicle if vision is obscured.
- Headlights should be re-aimed if necessary with trailer attached.
- Select a suitable low gear to assist your braking when descending steep grades.
- Avoid sudden steering manoeuvres at speed to minimize trailer mass affecting vehicle and trailer control.

CAUTIONS:

1. Do not use axle-mounted hitches.
2. Trailer brakes must meet State law requirements where vehicle will be operating. Some States specify that the maximum load to be towed must not exceed the vehicle weight.
3. It is permissible to tap into the brake system with a unit not more than 0.21 cc of fluid displacement during the operation of the brakes.
4. When the tow bar is not in use, the tongue should be removed in order to prevent injury and damage.
5. Correctly rated tow bar and tongue package must be used.

Loading

Refer Page 11 for table of Gross Vehicle Mass Ratings.

Tyre maximum load rating and maximum vehicle loading

Kerb weight is the weight of an unloaded vehicle which includes the weight of all coolants and lubricants together with a full tank of fuel. It must be understood that the maximum load rating shown on Tyre Rating Charts are not an actual load capacity that can be used for each wheel. While the tyre manufacturers rate the tyre for this load application at the maximum pressure shown in their literature, the vehicle manufacturer's suspension, ride and handling characteristics must be taken into account. Therefore, the maximum loaded vehicle weight should not be exceeded.

Air bleeding of fuel system (Diesel engine)

If the fuel tank has been emptied, the chance is that air might have entered the fuel system. With air in the fuel system, smooth flow of fuel into the engine is interrupted and to prevent this, bleeding of the fuel system should be performed.

1. With a spanner or screwdriver, loosen the bleeder screw on the overflow valve of the injection pump.
2. Operate the priming pump (as shown) up and down until fuel comes out the bleeder screw. Continue pumping until no more air bubbles appear in the fuel being pumped out.
3. After bleeding, securely tighten the bleeder screw and then operate the priming pump up and down several times.

Jacking instructions and changing a flat tyre

Jack, tools and spare wheel wrench are stored behind seat.

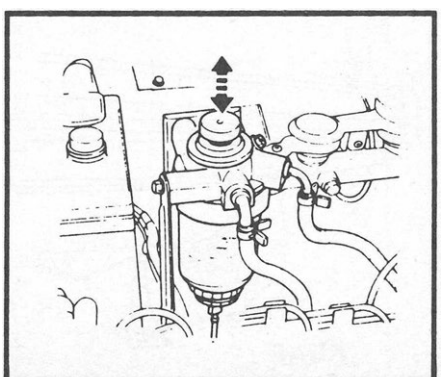
The jack handle is installed on the radiator sill within the engine compartment.

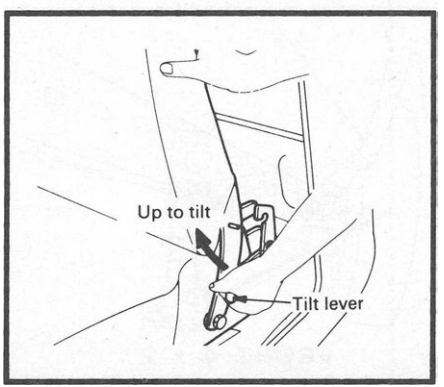
NOTE: The spare wheel can be removed or stowed in position by using the spare wheel wrench. Fit the hooked end of the wrench into a slot in the spare wheel winch.
Turn the handle counterclockwise to lower the spare wheel to the ground. When storing the wheel, turn the handle clockwise to raise the wheel.

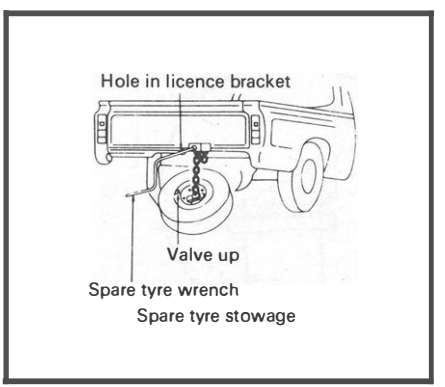
CAUTION: When the wheel is raised all the way into stowage position, turn the crank further to ensure wheel being held securely in position. Remove and stow wrench.

Preparations:

- Park on a level surface and set parking brake firmly.
- Set transmission in "reverse".
- Activate hazard warning flasher.
- Block the wheel diagonally opposite the jack position.
- Remove hub cap with tool provided.
- Loosen but do not remove wheel nuts.
- Place jack at recommended jacking point.





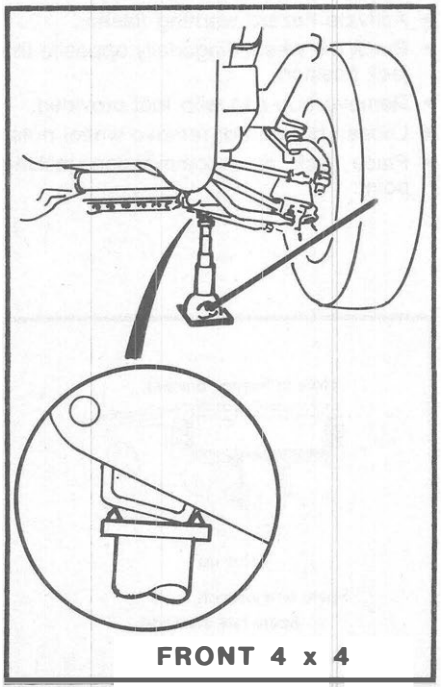


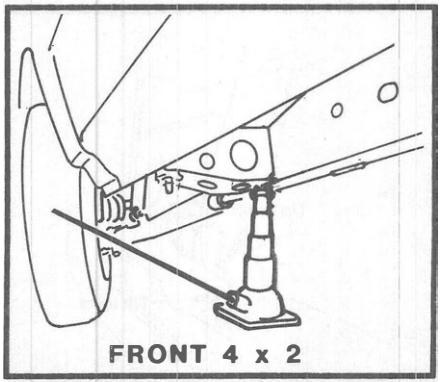
When jacking the front wheels of the 4 x 4 model using the bottle jack provided with the vehicle; care must be taken to ensure jack is located positively on lower control arm as shown in the sketch below.

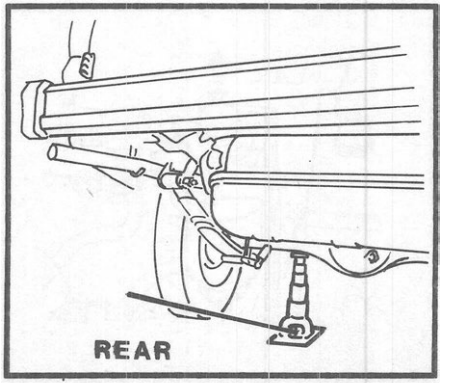
Jacking Points of Vehicle		
Front	Under the sidemember	(4 x 2 Model)
	Under the lower control arm	(4 x 4 Model)
Rear	Under the rear axle case	

Wheel Nut-Torques
88 Newton metres (65 ft. lbs.).

CAUTION: Follow jacking preparations and instructions in order to reduce the possibility of serious personal injury. Stand clear of and never get beneath the vehicle when it is supported only by a jack. Do not start or run engine while vehicle is on jack.


FRONT 4 x 4


FRONT 4 x 2


REAR

Emission Control Systems

Petrol engined vehicles only

Your vehicle is fitted with emission control systems which are designed to reduce the amount of hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NO_x) that are emitted from the engine and fuel system into the atmosphere. Hydrocarbons and oxides of nitrogen, when exposed to sunlight under certain conditions, produce photochemical smog. In addition, carbon monoxide is toxic when it becomes highly concentrated in the air.

The three major emission control systems fitted to your vehicle are:

1. **Evaporative Emission Control System**
   This system is designed to prevent the escape of fuel vapours from the fuel system and recycle them through the normal combustion process.
2. **Crankcase Emission Control System**
   This system is designed to prevent blow-by gases from escaping into the atmosphere and recycle them through the combustion process.
3. **Exhaust Emission Control System**
   The various components of this system operate collectively to limit, HC, CO and NO_x emissions in the exhaust gas. The exhaust Emission Control System is comprised of components such as the carburettor, automatic choke, coasting richer system, exhaust gas recirculation, spark advance control, cooling system thermostat, hot idle compensator, air injection reactor (where fitted), etc.

For detailed information on the operation, servicing and repair procedures for these systems refer to the appropriate service manual for your vehicle.

Owner responsibility

Your vehicle's emission control systems have been designed to meet the requirements of Australian Design Rules and State Regulations.

To ensure that these components achieve their purpose of controlling the emission of pollutants to the atmosphere, the engine or exhaust system of your vehicle must **not** be modified in any way. Any departure from the manufacturer's design specifications may increase the emissions or otherwise defeat the intent of the regulations.

IMPORTANT: Any person who removes, modifies or otherwise renders ineffective any emission control components fitted to a vehicle will be contravening the relevant regulations and be guilty of an offence under the regulations. Any person who owns and/or operates such a vehicle could also be guilty of an offence under the regulations.

Maintenance requirements

To ensure continuing compliance with the regulations it will be necessary for you to maintain your vehicle's emission control systems in accordance with the instructions given in the GMH Maintenance Plan (refer Section 6) and the relevant Service Manuals.

It is recommended that the necessary servicing be performed by an authorised GMH Dealer who has the specialised servicing equipment and trained personnel available to ensure that the adjustments and services specified are carried out.

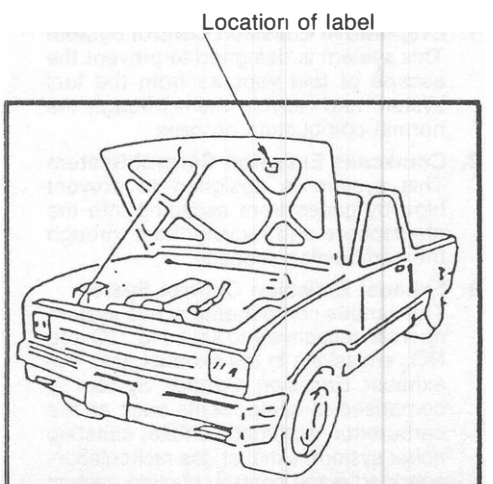
Service replacement parts

To ensure that your vehicle complies with the regulations it is imperative that any replacement parts used for maintenance services or for the repair of the emission control systems be new GM parts. Use of replacement parts other than genuine GM parts may impair the effectiveness of such systems.

Vehicle emission control information label

This label which is located in the engine compartment, contains all the necessary information required to correctly tune the engine in your vehicle.

The engine label is located on the underside of the engine hood.



VEHICLE EMISSION CONTROL INFORMATION

SET PARKING BRAKE AND BLOCK DRIVE WHEELS.

ENGINE TUNE-UP CONDITIONS

MAKE IDLE SPEED AND TIMING ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR CONDITIONER OFF IF INSTALLED, AIR CLEANER INSTALLED, DISTRIBUTOR VACUUM LINE, CANISTER PURGE LINE AND EGR VACUUM LINE DISCONNECTED AND PLUGGED, IDLE COMPENSATOR VACUUM LINE CLOSED BY BENDING RUBBER HOSE, AND TRANSMISSION IN NEUTRAL.
RECONNECT THE VACUUM LINES WHEN ADJUSTMENTS ARE COMPLETED.

IDLE SPEED AND IDLE MIXTURE SETTING PROCEDURE

1. TURN THE IDLE MIXTURE ADJUST SCREW ALL THE WAY IN AND BACK OUT 4½ TURNS.
2. ADJUST THROTTLE ADJUST SCREW TO 880 RPM.
3. ADJUST SETTING OF IDLE MIXTURE ADJUST SCREW TO ACHIEVE THE MAXIMUM ENGINE SPEED.
4. ADJUST THROTTLE ADJUST SCREW TO 880 RPM.
5. TURN IDLE MIXTURE ADJUST SCREW CLOCKWISE (LEAN) UNTIL ENGINE SPEED IS DOWN TO 830 RPM.
6. RESET THROTTLE ADJUST SCREW TO 800 RPM.

IGNITION TIMING SETTING PROCEDURE

1. SET SPECIFIED IDLE SPEED.
2. CONNECT TIMING LIGHT LEAD TO NUMBER 1 CYLINDER.
3. ALIGN MARK ON CRANKSHAFT PULLEY TO TIMING MARK WITH TIMING LIGHT AIMED TOWARD TIMING MARK.

CAUTION: REMOVAL OF ADJUSTMENT GAP AND ALTERATION TO OTHER THAN SPECIFIED IDLE MIXTURE SETTING MAY VIOLATE STATE LAWS. SEE SERVICE MANUAL FOR FURTHER INFORMATION.

ENGINE	IGNITION TIMING	PLUG GAP	IDLE SPEED
L4 2254 cc	6° BTDC	0.75 PH	800 RPM

P. No. 8941606290

VEHICLE EMISSION CONTROL INFORMATION

ENGINE TUNE-UP CONDITIONS

MAKE IDLE SPEED AND TIMING ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR CLEANER INSTALLED AND DISTRIBUTOR IDLE COMPENSATOR AND EGR VACUUM LINES DISCONNECTED AND PLUGGED, DASHPOT FULLY SHIFTED, ALL ACCESSORIES OFF AND TRANSMISSION IN NEUTRAL.
RECONNECT THE VACUUM LINES WHEN ADJUSTMENTS ARE COMPLETED.
SET PARKING BRAKE AND BLOCK WHEELS.

IDLE SPEED AND IDLE MIXTURE SETTING PROCEDURE

1. TURN THE IDLE MIXTURE ADJUST SCREW ALL THE WAY IN AND BACK OUT 3 TURNS.
2. ADJUST THROTTLE ADJUST SCREW TO 800 RPM.
3. ADJUST SETTING OF IDLE MIXTURE ADJUST SCREW TO ACHIEVE THE MAXIMUM ENGINE SPEED.
4. RESET THROTTLE ADJUST SCREW TO 900 RPM.
5. TURN IDLE MIXTURE ADJUST SCREW ¾ TURN CLOCKWISE (LEAN) FROM ITEM 4 POSITION.
6. RESET THROTTLE ADJUST SCREW TO 800 RPM.
7. ADDITIONAL PROCEDURE (DASHPOT SETTING) MAINTAIN THE ENGINE SPEED BETWEEN 2,200 RPM AND 2,600 RPM SET THE DASHPOT TO CONTACT THE DASHPOT SHAFT END WITH THE DASHPOT LEVER AND THEN FULLY TIGHTEN THE LOCK NUT.

IGNITION TIMING SETTING PROCEDURE

1. SET SPECIFIED IDLE SPEED.
2. CONNECT TIMING LIGHT LEAD TO NUMBER 1 CYLINDER.
3. ALIGN MARK ON CRANKSHAFT PULLEY TO TIMING MARK WITH TIMING LIGHT AIMED TOWARD TIMING MARK.

CAUTION: REMOVAL OF ADJUSTMENT CAP AND ALTERATION TO OTHER THAN SPECIFIED IDLE MIXTURE SETTING MAY VIOLATE STATE LAWS. SEE SERVICE MANUAL FOR FURTHER INFORMATION.

ENGINE	IGNITION		PLUG GAP	IDLE SPEED
	DWELL	TIMING		
L4 1949	52	6° BTDC	0.75 mm	800 RPM

P. No. 8941046800

Section 4

Customer Assistance and GMH Dealers

We want you to be happy with your new Rodeo and with the people you deal with while you have the vehicle.

Normally, any problems which may arise with the sales transaction, operation or servicing of your vehicle will be handled by your Dealer's Sales and Service department.

We realise however that, with the best intentions, misunderstandings do occur sometimes.

If you have a problem that has not been settled to your satisfaction here's what to do:

Step 1:

Discuss the problem with one of the Dealer's management people. If you feel you haven't got satisfaction from the Sales Manager or Service Manager — go to the General Manager or the Dealer himself.

Step 2:

If it seems that no-one at the dealership can help fully, write to the GMH Customer Assistance Manager in your State outlining your problem and including your name, address and telephone number; the vehicle model number and vehicle identification number; the vehicle delivery date and odometer reading and the Dealer's name and address. This information will be on your Warranty Certificate.

Step 3:

By now you should have satisfaction. If not, you can write to the National Customer Assistance Manager, GMH Sales Pty Ltd, P.O. Box 548D, Melbourne 3001.

GMH
Customer Assistance Managers

QUEENSLAND
General Motors-Holden's Sales Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

NEW SOUTH WALES AND AUSTRALIAN CAPITAL TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 481, P.O.,
EDGECLIFF, N.S.W 2027.

VICTORIA AND TASMANIA
General Motors-Holden's Sales Pty. Ltd.,
Victorian Zone Service Division,
Box 548D, G.P.O.,
MELBOURNE 3001.

SOUTH AUSTRALIA AND NORTHERN TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 221, P.O.,
ELIZABETH, S.A. 5112.

WESTERN AUSTRALIA
General Motors-Holden's Sales Pty. Ltd.,
P.O. Box 426,
WEST PERTH, W.A. 6005.

Authorised GMH Dealers

(Note: Dealership names and locations listed are effective at the time of printing. These may change from time to time without notice.)

NEW SOUTH WALES — Metropolitan Dealers

ARNCLIFFE
Suttons Motors (Arncliffe) Pty. Ltd.,
93 Princes Highway

ASHFIELD
Muirs Motors (Ashfield) Pty. Ltd.,
252 Parramatta Road

BALGOWLAH
Ross Hannon Holden
164 Condamine Street

BAULKHAM HILLS
Tony Packard Holden
Cnr. Victoria Avenue & Windsor Road

BELMONT
Challenge Holden
444 Pacific Highway

BLACKTOWN
West City Motors
120-128 Sunnyholt Road

BOWRAL
Emile Wheeler Holden
380 Bong Bong Street

CABRAMATTA
Ron Hodgson Holden
266 Hume Highway

CAMPBELLTOWN
Paul Wakeling Holden
63 Blaxland Road

CARDIFF
Brian Kelly Holden
35-39 Macquarie Road

CHATSWOOD
Sundell Holden
815-843 Pacific Highway

CHULLORA
Suttons Motors (Chullora) Pty. Ltd.,
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
J. N. Caldwell (Holdings) Pty. Ltd.,
1 Alexander Street

DEE WHY
Barry Smith Holden
Cnr. May and Mooramba Roads

GOSFORD
Noble Holden
Pacific Highway

GOULBURN
Geissler Motors
279-310 Auburn Street

HOMEBUSH
Suttons Motors (Homebush)
112 Parramatta Road

HOMEBUSH
Gilbert & Roach Pty. Ltd.
167-173 Parramatta Road

KIAMA
Kiama Motors Pty. Ltd.
35-41 Collins Street

KINGSFORD
John Pellegrini Holden
263-271 Anzac Parade

LAKEMBA
Nash Holden
1018 Canterbury Road

LIVERPOOL
A. C. McGrath & Co. Pty. Ltd.
Cnr. Castlereagh St. & Hume Highway

MIRANDA
Greg Ball Holden
1-3 Kiora Road

MOSMAN
Norman G. Booth Group Pty. Ltd.,
501 Military Road

NEWCASTLE
Young & Green Pty. Ltd.,
745 Hunter Street

NOWRA
Glendon Motors Holden
1-13 Princes Hwy., Bomaderry

PADSTOW
Purnell Bros. Holden
19 Davies Road

PARRAMATTA
Fair Deal Car Sales Parramatta
65 Church Street

PARRAMATTA
Hillsdon's Pty Ltd.,
87 Church Street

PENNANT HILLS
Les Vagg Holden
351-355 Pennant Hills Road

RANDWICK
Boyded Randwick
265 Avoca Street

ROCKDALE
C. V. Holland
571 Princes Highway

RYDE
Muirs Motors (Ryde) Pty. Ltd.,
603-605 Victoria Road

ST. MARY'S
Lance Motors Pty. Ltd.,
Corner Glossop & Harris Streets

TORONTO
Young & Green (Toronto) Pty. Ltd.,
Carey Street

VILLAWOOD
John A. Gilbert
766 Woodville Road

WAITARA
Suttons Motors
90 Pacific Highway

WINDSOR
Hawkesbury Valley Motors
122 George Street

WARILLA
Wilson's Warilla Pty. Ltd.,
29 Shellharbour Road

WOLLONGONG
Dwyers Pty. Ltd.,
31-33 Crown Street

WYONG
W. M. Holden
Pacific Highway

NEW SOUTH WALES — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ADELONG
- ALBURY
- ARDLETHAN
- ARMIDALE
- BALLINA
- BARADINE
- BARHAM
- BARRABA
- BATHURST
- BEGA
- BELLINGEN
- BLAYNEY
- BOMBALA
- BOURKE
- BREWARRINA
- CANOWINDRA
- CASINO
- CESSNOCK
- COBAR
- COFF'S HARBOUR
- CONDOBOLIN
- COLLARENEBRI
- COOLAMON
- COOMA
- COONABARABRAN

- COONAMBLE
- COOTAMUNDRA
- COROWA
- COWRA
- CROOKWELL
- CULCAIRN
- DENILIQUIN
- DORRIGO
- DUBBO
- DUNGOG
- EDEN
- FINLEY
- FORBES
- GILGANDRA
- GLEN INNES
- GLOUCESTER
- GRAFTON SOUTH
- GRENFELL
- GRIFFITH
- GULARGAMBONE
- GUNDAGAI
- GUNNEDAH
- GUNNING
- GUYRA
- HARDEN
- HAY
- HOLBROOK
- INVERELL
- JERILDERIE
- JUNEE
- KANDOS
- KATOOMBA
- KEMPSEY
- KURRI KURRI
- KYOGLE
- LAKE CARGELLIGO
- LEETON
- LISMORE
- LITHGOW
- MACKSVILLE
- MACLEAN
- MAITLAND
- MILTON
- MOLONG
- MOREE
- MORUYA
- MOSS VALE
- MUDGEE
- MULLUMBIMBY
- MUNGINDI
- MURWILLUMBAH
- MUSWELLBROOK
- NARRABRI
- NARRANDERA
- NARROMINE
- NOWRA
- NYNGAN
- ORANGE
- PARKES
- PEAK HILL
- PORT MACQUARIE
- QUIRINDI
- SCONE
- SINGLETON
- SPRINGWOOD
- TAMWORTH
- TAREE
  TEMORA
- TENTERFIELD
- TOTTENHAM
- TUMBARUMBA
- TUMUT
- TWEED HEADS
- WAGGA
- WALCHA
- WALLA WALLA
- WALGETT
- WARIALDA
- WARREN
- WAUCHOPE
- WELLINGTON
- WEST WYALONG
- WINGHAM
- WOODENBONG
- YASS
- YOUNG

VICTORIA — Metropolitan Dealers

BENTLEIGH
Boyanton Holden
280 Centre Road

BERWICK
Neil & Ross Neilson Pty. Ltd.,
Princes Highway

BRAYBROOK
Kevin Dennis Holden
272 Ballarat Road

BUNDOORA
Tony Davies Holden
413 Grimshaw Street

BURWOOD
Dustings Hillyer Holden
1200 Toorak Road

CAULFIELD
Booran Holden
1049 Glenhuntly Road

CHELSEA
Harrison Holden
370 Nepean Highway

CHELTENHAM
Balmoral Holden
1212 Nepean Highway

DANDENONG
Graeme Blanchard Holden
Princes Highway

DANDENONG
Patterson Cheney Pty. Ltd.
200 Cheltenham Road

DONCASTER
Lance Dixon Holden
601 Doncaster Road

ELSTERNWICK
Reg Hunt Motors Pty. Ltd.,
77 Nepean Highway

ESSENDON
Preston Motors (Essendon) Pty. Ltd.,
201-211 Keilor Road

FAWKNER
Mantello Holden
1263 Sydney Road

FERNTREE GULLY
Neilson Holden F.T.G.
890 Burwood Road

FOOTSCRAY
Alan Mance Holden
435 Barkly Street

FOOTSCRAY
Patterson Cheney Pty. Ltd.,
130 Moreland Street

FRANKSTON
Bayside Holden
140 Dandenong Road

GEELONG
R. & B. Smith Pty. Ltd.,
510 Moorabool Street

GEELONG
Winter & Taylor (Sales) Pty. Ltd.,
23 Cavendish Street

GLEN WAVERLEY
Geoff Brady Holden
565-577 Springvale Road

HASTINGS
Westernport Holden
762 Flinders Road

HEIDELBERG WEST
Arthur Ellis Holden
66 Bell Street

LILYDALE
Noel Dight Holden
Main Street

MORNINGTON
Peninsula Holden
Cnr. Nepean Highway & Tyabb Road

OAKLEIGH
Garry & Warren Smith Pty. Ltd.,
1575 Dandenong Road

PRESTON
Graham Hunt Holden
518 High Street

RINGWOOD
Bill Patterson Holden
45-57 Maroondah Highway

SOUTH MELBOURNE
Patterson Cheney Holden
132 Sturt Street

WERRIBEE
Ballan Holden
Princes Highway

WEST MELBOURNE
Reg Hunt Holden
577 King Street

VICTORIA — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ALEXANDRA
- ARARAT
- BACCHUS MARSH
- BAIRNSDALE
- BALLARAT
- BENALLA
- BENDIGO
- BIRCHIP
- BOORT
- CAMPERDOWN
- CASTERTON
- CASTLEMAINE
- CHARLTON
- COHUNA
- COLAC
- COLERAINE
- CORRYONG
- DAYLESFORD
- DERRINALLUM
- DIMBOOLA
- DONALD
- DROUIN
- ECHUCA
- EUROA
- HAMILTON
- HOPETOUN
- HORSHAM
- KANIVA
- KERANG
- KOOWEERUP
- KORUMBURRA
- KYABRAM
- KYNETON
- LEONGATHA
- MAFFRA
- MANSFIELD
- MARYBOROUGH
- MILDURA
- MINYIP
- MORTLAKE
- NATHALIA
- NHILL
- NULLAWIL
- NUMURKAH
- NYAH
- PORTLAND
- QUAMBATOOK
- RAINBOW
- ROCHESTER
- RUTHERGLEN
- SALE
- SEA LAKE
- SEYMOUR
- SHEPPARTON
- ST. ARNAUD
- STAWELL
- SWAN HILL
- TALLANGATTA
- TIMBOON
- TRARALGON
- UNDERBOOL
- WANGARATTA
- WARBURTON
- WARRACKNABEAL
- WARRNAMBOOL
- WODONGA
- WONTHAGGI
- WYCHEPROOF
- YARRAM
- YARRAWONGA

AUSTRALIAN CAPITAL TERRITORY

CANBERRA CITY
John Wright Holden
Josephson Street

CANBERRA CITY
Beazley & Bruce (ACT) Pty. Ltd.
44 Mort Street

WODEN
Commonwealth Motors Pty. Ltd.
58 Melrose Drive

FYSHWICK
Beazley & Bruce (ACT) Pty. Ltd.
96 Newcastle Street

QUEENSLAND — Metropolitan Dealers

ALBION
Bill Harrison Car Sales
Frodsham Street & Crosby Road

ASPLEY
Zupps (Aspley) Pty. Ltd.,
1442 Gympie Road

CLEVELAND
Russell Smith Holden
Cnr Queen & Doig Streets

IPSWICH
Zupps Holden
246 Brisbane Road, Booval

MOOROOKA
John Sivyer Holden
1060 Ipswich Road

MT. GRAVATT
Zupps Holden
1310 Logan Road

NEWSTEAD
Eagers Retail Pty. Ltd.,
95 Breakfast Creek Road

NUNDAH
Eagers (Northside)
1319 New Sandgate Road

PETRIE
North Pine Motors Pty. Ltd.,
Gympie Road

REDCLIFFE
Village Holden
425 Elizabeth Avenue

ROCKLEA
Task Motors
1696 Ipswich Road

SPRINGWOOD
Motorama Holden
Pacific Highway & Brennan Street

WINDSOR
Leach Holden
143 Newmarket Road

WYNNUM
Doug Barton Holden
200 Tingal Road

QUEENSLAND — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ATHERTON
- AUGATHELLA
- AYR
- BEAUDESERT
- BEERWAH
- BILOELA
- BLACKALL
- BOWEN
- BUNDABERG
- CABOOLTURE
- CAIRNS
- CALOUNDRA
- CHARLEVILLE
- CHARTERS TOWERS
- CLERMONT
- CLONCURRY
- CROWS NEST
- CUNNAMULLA
- DALBY
- DIRRANBANDI
- EMERALD
- GATTON
- GAYNDAH
- GLADSTONE
- GOONDIWINDI
- GYMPIE
- INGHAM
- INNISFAIL
- JULIA CREEK
- KILCOY
- KINGAROY
- LAIDLEY
- LONGREACH
- MACKAY
- MAREEBA
- MARYBOROUGH
- MITCHELL
- MONTO
- MORANBAH
- MOURA
- MT. ISA
- MURGON
- NAMBOUR
- NANANGO
- NOOSA HEADS
- PROSERPINE
- QUILPIE
- ROCKHAMPTON
- ROMA
- ROCKLEA
- SOUTHPORT
- SPRINGSURE
- STANTHORPE
- ST. GEORGE
- TARA
- TOOWOOMBA
- TOWNSVILLE
- TULLY
- WARWICK
- WINTON
- YULEBA

SOUTH AUSTRALIA — Metropolitan Dealers

ADELAIDE
City Holden
203-221 Grenfell Street

ADELAIDE
United Motors Retail Ltd.
72 Franklin Street

ELIZABETH
Peter Page Holden
Elizabeth Way

GLENELG
John H. Ellers Pty. Ltd.,
282 Brighton Road

MALVERN
Claridge Motors Pty. Ltd.,
361-367 Unley Road

MILE END
United Motors Co. Pty. Ltd.
71 West Beach Road

PORT ADELAIDE
Smith Motor Co. Pty. Ltd.,
171 Commercial Road

VALLEY VIEW
Plaza Holden
817-839 North East Road

SOUTH AUSTRALIA — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- BALAKLAVA
- BERRI
- BURRA
- CEDUNA
- CLARE
- CLEVE
- CRYSTAL BROOK
- CUMMINS
- GAWLER
- GLADSTONE
- JAMESTOWN
- KADINA
- KEITH
- KINGSCOTE
- KINGSTON
- LAMEROO
- LOXTON
- MAITLAND
- MALLALA
- MENINGIE
- MILLICENT
- MT. BARKER
- MT. GAMBIER
- MURRAY BRIDGE
- NARACOORTE
- ORRORO0
- PORT AUGUSTA
- PORT LINCOLN
- PORT PIRIE
- QUORN
- RENMARK
- STRATHALBYN
- TANUNDA
- VICTOR HARBOUR
- WAIKERIE
- WHYALLA
- WUDINNA
- YANKALILLA
- YORKETOWN

WESTERN AUSTRALIA — Metropolitan Dealers

BELMONT
Major Motors
225 Great Eastern Highway

CANNINGTON
Brian Gardner Holden
1308 Albany Highway

FREMANTLE
Shack Motors
64 Queen Victoria Street

GOSNELLS
Lance Gibbons Holden
2325 Albany Highway

MANDURAH
Estuary Holden
1 Gibson Street

MELVILLE
Melville Motors Pty. Ltd.,
532-536 Canning Highway

MIDLAND
John Goldie Holden
161 Great Eastern Highway

MORLEY
Metro Motors Pty. Ltd.,
212 Walter Road

NAVAL BASE
Shacks Cockburn
15 Rockingham Road

OSBORNE PARK
North City Holden
Cnr. Scarborough Beach Rd. & Harborne Street

PERTH
City Motors
505 Newcastle Street

VICTORIA PARK
Young's Holden
529 Albany Highway

WANNEROO
Phoenix Holden
316 Berriman Drive

WESTERN AUSTRALIA — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ALBANY
- BEVERLEY
- BOYUP BROOK
- BROOKTON
- BRUCE ROCK
- BRIDGETOWN
- BUNBURY
- BUSSELTON
- CARNAMAH
- CARNARVON
- COLLIE
- CORRIGIN
- CRANBROOK
- DALWALLINU
- ESPERANCE
- EXMOUTH
- GERALDTON
- GNOWANGERUP
- GOOMALLING
- KALGOORLIE
- KAMBALDA
- KATANNING
- KELLERBERRIN
- KOJONUP
- KUNUNURRA
- MANJIMUP
- MERREDIN
- MOORA
- MORAWA
- MT. BARKER
- NAREMBEEN
- NARROGIN
- NORTHAM
- NORSEMAN
- PINGELLY
- PINJARRA
- PORT HEDLAND
- QUAIRADING
- WAGIN
- WILLIAMS
- WYALKATCHEM

TASMANIA — Metropolitan & Country Dealers & Service Dealers

HOBART
Motors Pty. Ltd.,
179 Macquarie Street

BURNIE
Motors Pty. Ltd.,
84-89 Marine Terrace

DEVONPORT
Motors Pty. Ltd.,
628 Victoria Parade

KING ISLAND
Island Motors Pty. Ltd.,
Netherby Road, Currie

LAUNCESTON
Motors Pty. Ltd.
165 Brisbane Street

SMITHTON
Motors Pty. Ltd.,
16 Nelson Road

ULVERSTONE
Motors Pty. Ltd.,
99 Reibey Street

NORTHERN TERRITORY — Dealers

ALICE SPRINGS
Kittle Bros. (Alice Springs) Pty. Ltd.,
Cnr. Wills Terrace & Railway Terrace

DARWIN
Suttons Motors (Darwin) Pty. Ltd.,
Cnr. Mitchell and Knuckey Streets

Section 5

Specification and service station information

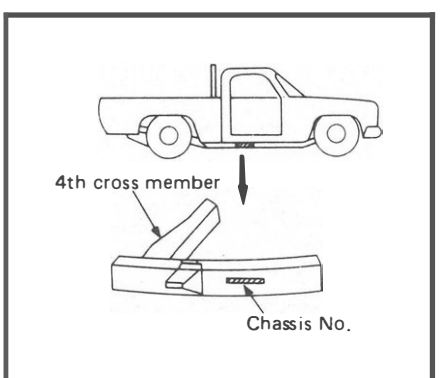
General data

V.I.N. Plate

Installed within the engine compartment.

Chassis Number

Stamped on the chassis rail under driver's door.



Specifications and technical data

Engine

Petrol—	Model G200Z, 4 cylinder, single overhead cam.	
Piston displacement	:	1949 cc
Compression ratio	:	8.4:1
Spark Plugs	:	NGK PB 6ES
Spark plug gap	:	0.7-0.8 mm
Oil filter	:	Full flow replaceable cartridge
Oil capacity	:	3.6 litres with filter. 3.2 litres without.
Ignition timing	:	6° BTDC
Firing order	:	1-3-4-2
Distributor point gap	:	0.4-0.5 mm
Idle speed	:	800 rpm
Valve clearance — Cold	:	Intake 0.15 mm Exhaust 0.25 mm
Carburettor	:	Nikki, Stromberg, 2 barrel downdraft.
Coolant capacity:		7.0 litres

Petrol:	Model 4ZD1 4 cylinder, overhead cam.	
Piston displacement	:	2254 cc
Carburettor type	:	2 barrel downdraft
Compression ratio	:	8.3:1
Spark plug gap	:	1.05 mm
Spark plug type	:	BPR 6ES-11
Oil capacity (inc. filter)	:	4.9 litres
Ignition timing	:	6° BTDC
Idle speed	:	800 rpm
Firing order	:	1-3-4-2
Valve clearance (cold)	:	Inlet: 0.15 mm Exhaust: 0.25 mm
Coolant capacity	:	8.0 litres

Diesel—	Model C223, 4 cylinder.	
Piston displacement	:	2238 cc
Compression ratio	:	21:1
Combustion chamber type	:	Swirl chamber
Oil capacity	:	6.2 litres with filter, 5.0 litres without.
Injection timing	:	10° BTDC
Injection pressure	:	10.3 MPa
Idle speed	:	675 rpm
Valve clearance — Cold	:	Intake 0.45 mm Exhaust 0.45 mm
Coolant capacity	:	10.3 litres

Engine Number
(Petrol) — Stamped on the right part of the cylinder body near distributor.
(Diesel) — Stamped on the front part of the cylinder body.

Engine Tune-up Data Plate
(Petrol) — Bonnet inside panel.
(Diesel) — Air cleaner duct pipe.

Tyre Inflation Pressure Plate
Rear face of the driver's door.

Colour Identification Number Plate
Installed in the engine compartment.

Clutch

Type	Single dry disc with diaphragm spring.
Size	215 mm (8.5 in.) diameter
Control	Mechanical

Transmission

5 Speed fully (MSG 5K)

	Ratio
First	4.122:1
Second	2.493:1
Third	1.504:1
Fourth	1.000:1
Fifth	0.855:1
Reverse	3.753:1 (4 x 2)
	3.720:1 (4 x 4)

Lubricant capacity: 1.55 litres MSG5K

Transfer Gear Ratios: (4 x 4)
High 1:1 Low 1.87:1
Lubricant Capacity: 2.5 litres Trans & Transfer Case.

Front Suspension — Independent wishbone arms, torsion bar springs, with stabilizer bar, with double-acting shock absorbers.

Rear Suspension — Semi-elliptic leaf spring, with double-acting shock absorbers.

Front Axle — 4 x 4 Models
Fully Floating
Ratio 4.555:1
4.100:1 (1800 kg GVM models)
Lubricant capacity: 1 litre

Rear Axle — Banjo Semi-floating
Ratio 4.551:1
4.100:1 (1800 kg GVM models)
Lubricant capacity: 1.5 litres

Steering — Variable Ratio Recirculating ball and nut. Ratio 26 - 30:1
Lubricant capacity:
0.19 litres

Service Brake — Hydraulic with vacuum servo, ventilated disc in front, self-adjusting drum, leading/trailing at rear.

Parking Brake — Mechanical internal-expanding type acting on rear wheels.

Battery — N70Z 12 volts (–ve earth)
70 amp. hrs. (Model with diesel engine)
50 D20R, 12 volts (–ve earth) 50 amp. hrs. (Models with petrol engine)

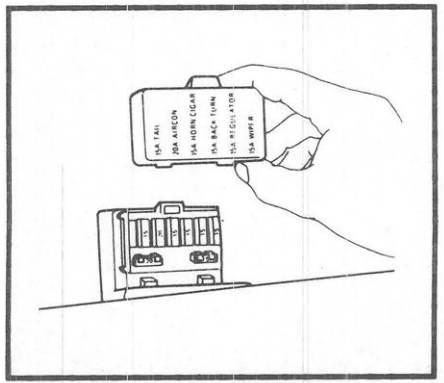
Fuel Tank Capacities:
50 litre — All Short Wheel Base Models
— All Crew Cabs
— All Space Cabs
72 litre — Long Wheel Base Pick Up
— Long Wheel Base Chassis Cab

Fuses

The fuse box is installed on the left side valance panel within the engine compartment. The fuse box contains six fuse cartridges in use.

Applicability	Amperes
Tail lamps, Instrument panel	15
Heater	20
Horn, cigar lighter	15
Back-up lamp, Turn signal lamps	15
Fuel pump (Petrol), Regulator	15
Wiper, Washer and Radio	15

NOTE: Do not use fuses of higher amperage than those recommended above.



Lamp Bulbs

Used in	Quantity	Power
Headlights Rectangular (Base models)	2	65/55W
Headlights Quartz Halogen (DLX & LS models)	2	65/55W
Turn signal lamps (front)	2	23W
Tail and stop lamps	2	23/8W
Turn signal lamps (rear)	2	23W
Licence plate lamp	1	5W
Side turn signal lamps	2	5W
Clearance lamps	2	8W
Dome lamp	1	7.5W
Back-up lamps	2	23W
Speedometer lamps, Combination meter lamp	3	3.4W
Oil pressure indicator lamp	1	3.4W
Parking brake warning lamp	1	3.4W
Charge indicator lamp	1	3.4W
Turn signal indicator lamps	2	3.4W
High beam indicator lamp	1	3.4W
Brake indicator lamp (if equipped)	1	3.4W
4WD indicator lamp (4 x 4 only)	1	3.4W

Bulb replacement

Due to the different types of lamps, there are several different procedures covering bulb replacement.

Headlights

- Remove the radiator grille.
- Loosen the three screws fixing the sealed beam unit and remove the sealed beam unit by turning the retaining ring counterclockwise.
- To install, fit the bosses on the headlight lens into the grooves so that the top mark side is turned up.

Headlights — Quartz Halogen

(where fitted)

1. Remove the radiator grille.
2. Remove the headlight and plug socket with the wire from lamp base.
3. Press in retaining ring against the reflector, turn anti-clockwise and withdraw the lamp holder.
4. Remove the bulb from lamp holder.
5. Insert new bulb so that the lug on the bulb engages in the recess in the lamp holder. Avoid touching the glass of the headlight globe as this drastically reduces the bulb life.
6. Proceed in reverse sequence to removal.

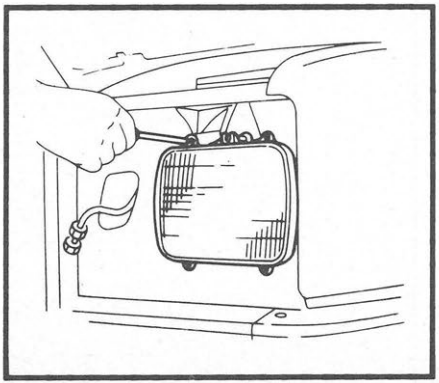
NOTE: Proper aiming of the headlights is most important to assure sufficient illumination of the highway without blinding other motorists. When light aiming is necessary it is advisable to contact a GMH Dealer who has special equipment for this purpose.

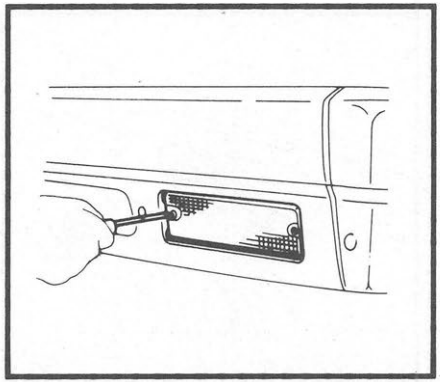
Front combination lamps

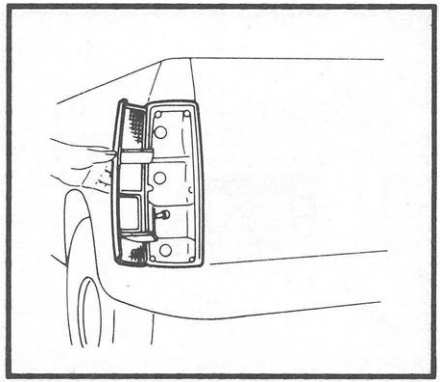
Take out two screws fixing the lens and remove the lens. Remove the bulb from the socket by pushing it in and turning it counterclockwise.

Rear combination lamps

Take out the six screws fixing the lamp lens. Remove the bulb from the socket by pushing it in and turning it counterclockwise.







Side turn signal lamps

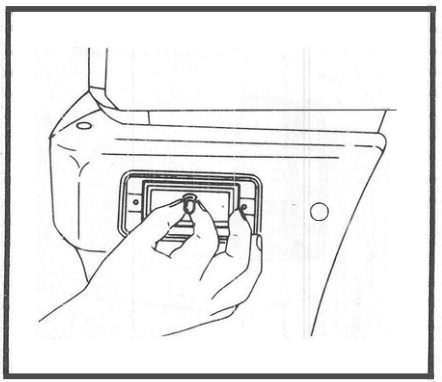
Take out two screws fixing the lens and remove the lens, then pull out the bulb.

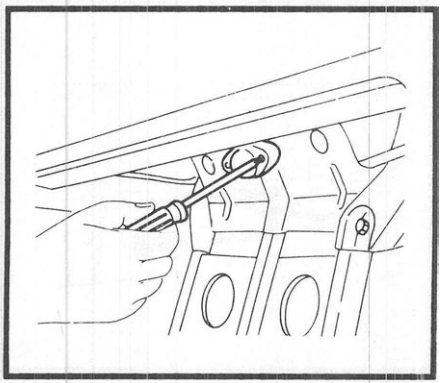
Number plate lamp

Take out the two screws retaining the lamp lens. Remove the bulb from the socket by pulling it.

Dome lamp

Carefully prise off the light cover using a screwdriver. Remove bulb from spring clip. Install new bulb and replace cover.





Section 6

Appearance, maintenance and service

Paintwork

The paint on your Rodeo is finished in acrylic enamel and will stay bright and new-looking provided you wash and wax it regularly, using approved products. Weekly washing is recommended if the vehicle is being used constantly or if it is not parked under cover.

Before you wash the paintwork, thoroughly wash in and around the front and rear windows and check that door drain holes, tailgate drain holes and rocker sill vents are clean. Hose off any heavy dirt on the glass, but leave final cleaning of the glass until last.

Washing tips

Use either cold or warm water — preferably running.

Use clean chamois cloths, sponges or rags (old, clean linen is better than new material for glass).

Don't wash your vehicle in bright sunlight — it will streak.

Grease and oil can be removed with a little kerosene or white spirits. Flush with water afterwards.

If petrol is spilled during refilling, flush with water immediately.

Be sure that your cleaner, polish or wax is suitable for acrylic finishes. AC Delco Wash & Wax from your GMH Dealer is highly recommended.

Insect spots can be removed with a mixture of 220 grams of baking soda in 2 litres of water. Flush clean afterwards. New tyre look can be restored with AC Delco Tyre Black from your GMH Dealer.

Tarnished chrome responds well to AC Delco Polishing Liquid.

Cleaning of interior

Care and cleaning of upholstery

Dust and dirt particles which accumulate on the surface of the interior trim should be removed every few weeks — more often with constant hard driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains from an upholstery fabric, it is necessary to determine as accurately as possible:

1. The type of fabric.
2. The nature and age of the stain.
3. The effect of the stain removal agent upon the colour, structure and general appearance of the trim material.

It is essential that stains be removed from the trim material as soon as possible after they have been made. If they are allowed to remain on the fabric for any length of time they very often become oxidised or set, and removal becomes difficult, if not impossible.

Cleaning P.V.C. Coated Fabrics

Vinyl (P.V.C.) coated fabrics are used for seating, headlining and auxiliary trimming. The grades used vary according to their function. P.V.C. fabrics are generally made with fabric bases upon which synthetic resins are applied. Care of P.V.C. fabrics is a relatively simple but important matter. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle. Should dirt accumulate and become embedded in the material pattern the following procedure is recommended.

1. Using lukewarm water and soap, work up thick suds on a piece of cheesecloth, and apply to the surface. A soft bristle brush can be used to advantage to remove stubborn stains or dirt embedded in the grain of the material.
2. The operation should be repeated using only a damp cloth and no soap.
3. The trim should then be wiped dry with a soft cloth.

The above cleaning instructions also apply to the rubber floor mats.

IMPORTANT: Where stubborn stains on P.V.C. fail to respond to the above methods, a light application of AC Delco Upholstery Cleaner (Part Number M38424) with a soft cloth will invariably prove satisfactory.

Do not use cleaner excessively.

Cleaning Cloth Trim Material

Where the seats in your vehicle are upholstered with cloth, the following instructions should be observed.

Most loose dirt and dust can be removed by a vacuum cleaner or a soft brush. **Do not use a Whisk Broom or a Coarse Hair Brush.** If normal soiling should take place, it is recommended that the fabric be sponged lightly with warm water containing a detergent and a small amount of ammonia. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with dry cloth. AC Delco Upholstery Cleaner may be used to advantage, but should be used sparingly.

Cleaning Carpets

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt; then using AC Delco Car Care Upholstery Cleaner, clean approximately one square foot at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to fluff the carpet, pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

Cleaning Seat Belts

Cleaning of the seat belts can be carried out by using a mild non-abrasive soap and lukewarm water. After washing be sure to thoroughly sponge the washing solution out of the belts.

CAUTION: Do not bleach or dye belts since this may severely weaken belts.

Cleaning glass

The interior glass areas of the vehicle should be cleaned using a non-abrasive household detergent and clean, soft cloth.

Care must be taken when cleaning inside the rear windscreen so as not to damage the heating element.

CAUTION: Many cleaners may be toxic or flammable, or may cause damage to the interior. When cleaning the interior, do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents. Never use carbon tetrachloride, gasoline or naphtha for any cleaning purpose.

IMPORTANT: Be sure the vehicle is well ventilated while using any cleaning agents. Follow the manufacturer's recommendations when using such products.

Cleaning of exterior

CAUTION: Care should be used when moving the vehicle after washing, in case water has affected the brakes.

Frequent hosing and washing of the vehicle cannot be overstressed as the most effective precaution against corrosion.

The effects of salts and other corrosive materials from road surfaces can result in accelerated rusting and deterioration of underbody components such as brake and fuel lines, frame, underbody floor pan, exhaust system, brackets, parking brake cables. These corrosive effects, however, can be reduced by periodic hosing of the underbody with plain water whenever the vehicle is being washed. In geographic areas having a heavy concentration of corrosive materials it is recommended that the complete underbody be inspected and washed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out underbody members where dirt and other foreign materials may have collected.

Glass

Special care should be taken to avoid scratching the glass when it is being cleaned. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. An accumulation of these on the windshield can make night driving very unpleasant. Flush off any heavy mud deposits on the glass when washing the body, but leave the final cleaning and polishing until afterwards.

Each section of glass should then be washed in turn, making sure that the water, its container and the sponge are quite clean and free from grit. If the glass is very dirty, a little household ammonia mixed with warm water will help. Clean old linen cloth is better than new material for polishing glass.

Insect spots

Insect spots on the paint finished parts of the vehicle can be easily washed off by using a solution containing 2 litres of water in which approx. 220 grams of baking soda (Bicarbonate of Soda) has been dissolved. Flush the washed parts with clean water. After washing and drying, park the vehicle in a shaded area.

Washing

The acrylic enamel finish on your vehicle is superior to ordinary finishes and will stay bright and new looking for years with little or no polishing, provided it is given a reasonable amount of regular washing to keep off road grime.

To preserve the original paint finish of the vehicle, it is essential that it is kept clean by frequent washing. Washing not only removes dirt and road grime that settles on the vehicle, but also dilutes acids which accompany such grime, in particular, salt from air or sea spray encountered in coastal areas which often become trapped in crevices. Tree sap, road tar, excretion from insects and industrial fall out often contain harmful chemicals and other foreign matter that may permanently damage the paint finish of the vehicle. These should be removed without delay, using an effective removal agent.

Regular washing

If the vehicle is in continuous use, it should be washed at least once a week with either cold or warm water (preferably running water), using clean chamois leathers, sponges or rags free from dirt or grit likely to scratch the paint finish. It is good practice to first hose the vehicle to remove as much of the grit and grime as possible before swabbing the surface. Do not wash the vehicle under bright sunlight when high temperatures are being experienced, as this will result in a streaky, watermarked finish.

AC Delco Wash and Wax (Part No. M37226) loosens road grime to make washing easier and leaves paint shining clean.

NOTES:

1. Calcium chloride and other salts, road oil and tar, tree sap, chemicals from factory chimneys and other foreign matter may damage any known automobile finish if allowed to remain in contact with the paint film.
2. Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to acrylic finishes. When purchasing a cleaner, polish or wax, ensure that it can be safely used on an acrylic finish.
3. Grease and oil, and even tar if it's fresh, can be removed from the finish with a little Kerosene or White Spirits. As a precaution against staining, wash and polish as soon as possible the area from which the foreign matter has been removed.

IMPORTANT: If petrol is spilt on the paint finish when refilling, owners are advised to ensure that it is flushed off with clean water immediately. The reason is that petrols currently in use have a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.

Paintwork inspection

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust and thus affect paint finish. Any deep scratches, cracks or breakdown in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust "creep" will extend beyond the damaged area. This applies particularly in sub-tropical areas or coastal districts, where the moist or salt-laden atmosphere accelerates rusting if it is allowed to develop through neglect. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the vehicle is exposed to elements for prolonged periods.

The vehicle therefore should be garaged whenever possible.

Chromium plated parts

Generally, a rub with a clean soft cloth will be all that is necessary to remove dust from the chromium plated parts. However, if the chromium is covered with dead insects or mud, it should be washed with warm soapy water and then cleaned with AC Delco Polishing Liquid (Part Number M37221). This polish should also be used if the chromium shows signs of tarnishing. Do not use ordinary metal polishes as they may contain abrasives which would ruin the plating.

Polishing

Even though the acrylic enamel finish on your vehicle is more durable than ordinary enamels, under certain conditions you may wish to polish your vehicle to provide maximum protection against road dirt and industrial fall out, etc. Also, the application of a polish may be required to remove foreign matter which is not normally removed from vehicles by washing. Over a period of time, such foreign matter may build up on the paint surface to the detriment of its overall appearance.

Do not attempt to apply a polish without first washing to remove existing loose grit, surface dirt, dust or grease, etc.

Either AC Delco Polishing Liquid (Part No. M37221) or AC Delco Polishing Cream (Part No. M37220) will quickly and easily impart a deep, rich shine when used as directed on the container.

Tyres

Sponging with cold water is all that is necessary for normal cleaning of the tyres. Oil and grease can, and should, be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanics' hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.

New Tyre look can be restored by using Tyre Black.

Replacement Parts and Accessories

GM Parts & Accessories Division of General Motors-Holden's Limited is established to distribute GM Parts and Accessories through Authorized Dealers.

GM Parts and Accessories are manufactured to the high standards of quality established for General Motors-Holden's vehicles—to the correct specifications and of the same materials as the original parts on your vehicle. They are, therefore, warranted, and it is definitely in your interest to specify these quality parts and accessories.

Engine oil and filter recommendations

- Use SF engine oil for petrol engine, and CC or CD engine oil for diesel engine (See Section "Recommended Lubricants".)
- Change oil after first 1,000 km and each 5,000 km thereafter, but more often under the following conditions:
  —driving in dusty conditions
  —extensive idling
  —short-trip operation at freezing temperatures (engine not thoroughly warmed up).
- Operation in dust storms may require an immediate oil change.
- For petrol engine, replace the oil filter at the first oil change, and every second oil change thereafter. For diesel engine, replace the oil filter element after the first 1,000 km, and thereafter every 15,000 km. See your dealer for advice on the frequency of oil and filter changes under unusual driving conditions.
  The above recommendations apply to the first change as well as subsequent oil changes. The oil change interval for your engine is based on the use of SF oils for petrol engine (CC or CD for diesel engine) and quality oil filters. Oil change intervals longer than those listed above will seriously reduce engine life and may affect entitlement under the provisions of the New Vehicle Warranty. Check the oil level frequently during the break-in period since higher oil consumption is normal until the piston rings become seated.

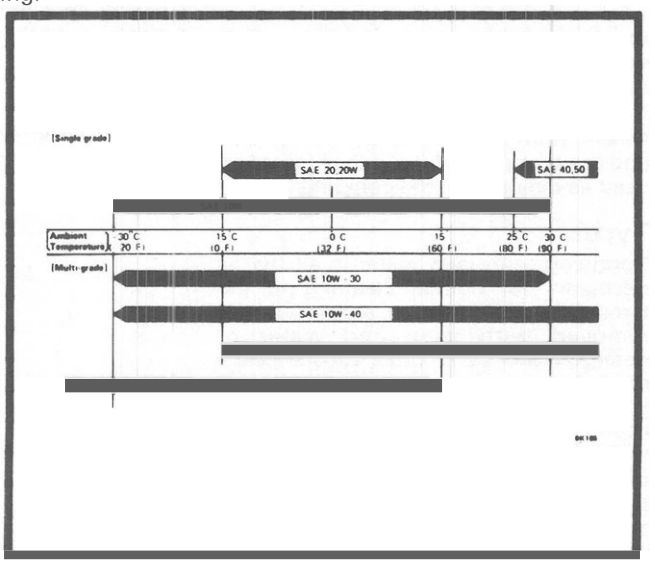
NOTE: Non-detergent and other low quality oils are specifically not recommended. The use of SF engine oils for petrol engine (CC or CD for diesel engine) and proper oil and filter change intervals promote continued reliability and performance from your engine.

The proper oil viscosity helps assure good cold and hot starting.

Recommended viscosity

Select the proper oil from the "Recommended Lubricant".

Use the correct oil viscosity for existing ambient temperatures as shown.



Checking oil level

The engine oil should be maintained at proper level. The best time to check it is before operating the engine or as the last step in a fuel stop.

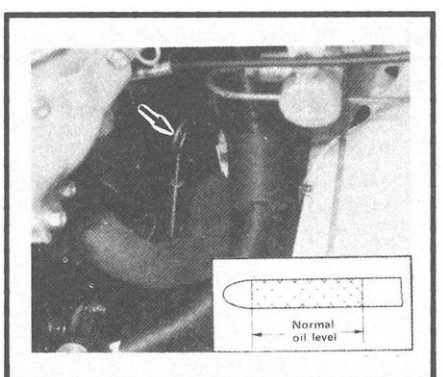
This will allow the oil accumulation in the engine to drain back in the crankcase. To check the level, remove the oil gauge rod (dip stick), and wipe it clean. It is quite normal with a petrol engine that no indication of oil is visible when oil gauge rod is first removed. Do not reinsert rod for 30 seconds, or if the engine has just stopped running for two minutes. Reinsert rod firmly for an accurate reading. The oil gauge rod has marking which indicates the normal oil level.

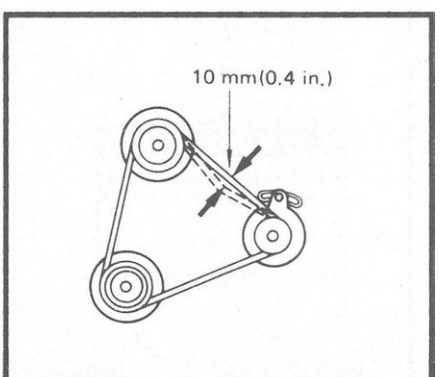
If the oil level is lower than the marked area, it indicates the need for replenishment. The oil level should be maintained within the level mark at all times.

Drive belt

Drive belt should be checked at the first 1500 and every 5,000 km thereafter for proper tension. A loose belt will affect water pump and generator operation.

The fan belt tension is normal if the belt gives a lateral deflection of about 10 mm (0.4 in) when a good finger pressure is applied to the midway between the fan pulley and generator pulley. To adjust the fan belt tension, turn loose the bolt on the generator bracket and on the adjust plate and pivot the generator as required.





Valve clearance

Incorrect valve clearance will result in increased engine noise and lower engine output thereby adversely affecting engine performance. Re-tighten rocker shaft nuts before checking and adjusting valve clearance.

Manifold, cylinder head mounting

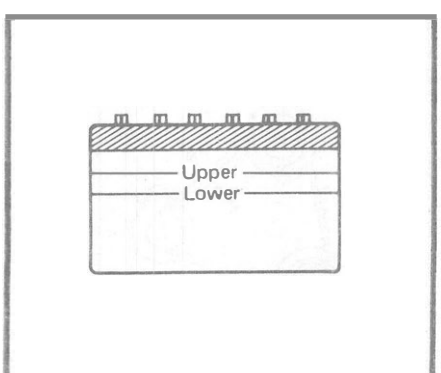
Manifold mounting nuts and cylinder head bolts should be carefully adjusted to correct torque to compensate for compression of gasket.

Cylinder head bolt torque:
98 Nm. (72 ft-lbs) Petrol engine
78 Nm. (58 ft-lbs) Diesel engine

Electrical system

Battery Care—Check the battery electrolyte every month. If the levels are lower than the specified level add colourless and odourless drinking water or distilled water to bring to the proper level.

In freezing weather the vehicle must be driven after adding water to properly mix it with the electrolyte and prevent freezing.



CAUTION: Never expose battery to open flame or electric spark—chemical action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact skin, eyes, fabrics, or painted surfaces—fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Wear eye protection when working with battery.

Battery Terminals—The battery cable terminals must be clean and tight. When corrosion appears on the terminals they should be cleaned in a solution of baking soda and water or ammonia and water. After cleaning, the top of the battery should be flushed off with clean water.

Generator—The connections in the entire charging system must be kept tight and free from corrosion or anything that will cause high resistance in the circuit.

NOTE: Never remove generator "battery" lead without first disconnecting battery ground cable.

CAUTION: Do not short across or attempt to polarise system.

Starting Motor—Check the solenoid mounting and starting motor mounting bolts periodically.

Fuel system

Carburettor (Petrol engine)

Tighten the carburettor to manifold and the manifold to cylinder head stud nuts to prevent air leaks. Setting and adjusting of the carburettor has a definite bearing on the engine performance and the contents of the exhaust gases. As the carburettor is intricate in design and necessitates the use of various instruments for adjustment, avoid overhauling and random adjustment and have your GMH dealer or distributor check and adjust it regularly.

Fuel Filter (Petrol Engine)

The fuel filter is installed on the frame side member near the fuel tank. It should be replaced every 20 000 km.

It is clipped in position and can be removed easily by disconnecting two fuel hoses.

Ensure that new filter is installed correctly.

Fuel Filter (Diesel Engine)

This filter should be replaced every 15,000 km.

1. Loosen the fuel filter by turning it counter clockwise, and then remove it.
2. Wipe clean the seating face of the filter cover.
3. Lightly oil the O ring on the new filter and install it by turning clockwise. Tighten according to instructions on filter.
4. Bleed fuel system according to instructions given in Section 3.

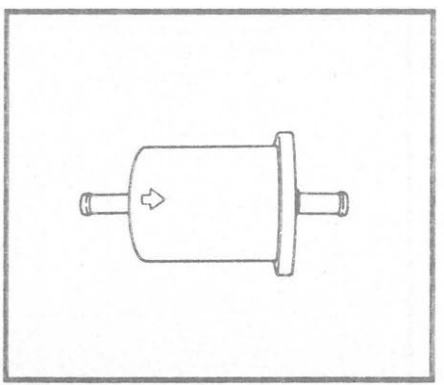
Accelerator Linkages

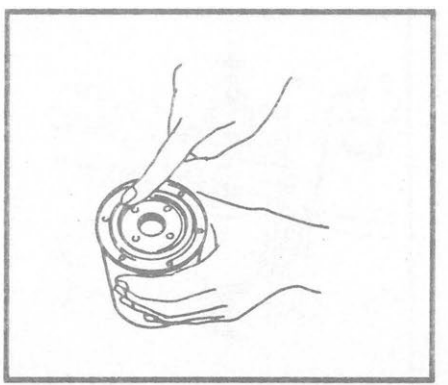
Check, adjust and lubricate with engine oil every 12 months or 20,000 km.

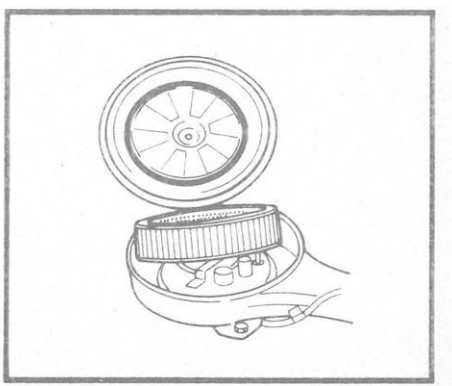
Air Cleaner

The air cleaner uses a viscous type element so that servicing is unnecessary until 40,000 km of replacement interval is reached. However, element replacement intervals should be shortened accordingly if the vehicle is operated mainly in dusty areas.

NOTE: It is strongly advised to use genuine GMH air cleaner element at the time of replacement as it is a viscous type and differs from conventional dry type air cleaner in construction and function.







CAUTION: Do not attempt to clean element even if it is fouled as the element is designed to provide normal filtering efficiency before it becomes due for replacement.

CAUTION: The engine air cleaner should be installed at all times unless temporary removal is necessary during repair or maintenance of the vehicle, because in the absence of the air cleaner, backfiring could cause a fire in the engine compartment.

Electrical Fuel Pump (Petrol Engine)
The electrical fuel pump should be checked regularly to make sure the setting screws and rubber hoses are tight.

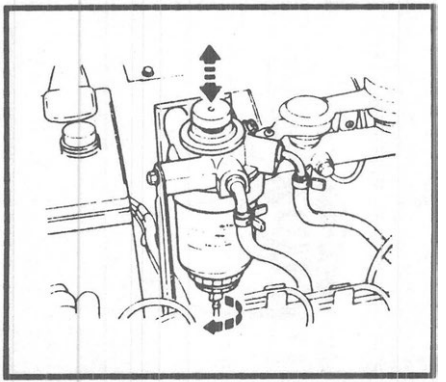
Draining of water separator (Diesel Engine)
Open the engine hood and place a container (approximately 0.2 litres capacity) at the end of the vinyl hose beneath the drain plug on the separator.

Loosen the drain plug by turning it counter-clockwise (approximately 5 turns) and operate the priming pump up and down until fuel is filled up into the water separator.

After draining, securely tighten the drain plug by turning it clockwise and operate the primary pump up and down several times.

After starting the engine, check that there is no fuel leak from the drain plug. Also check that the fuel filter indicator has turned off.

If water separator requires frequent draining, have the fuel tank drained for removal of water at your GMH dealer.



Engine cooling system

NOTE: Supplemental inhibitors or additives claiming to provide increased cooling capability that have not been specifically approved by GMH are not recommended for addition to the cooling system. These additives may be detrimental to the efficient operation of the system, and may represent an unnecessary operating expense.

The cooling system must be checked and serviced regularly if the engine is to operate efficiently.

Corrosion protection

To protect components of the cooling system from corrosion the system should be filled or topped up only with premixed coolant comprising clean water and permanent type (ethylene glycol) anti-freeze fluid to GM 1899M specification. A 50-50 mixture is recommended, however, a mixture of 1 part anti-freeze to 2 parts water would be acceptable.

If you live in an area where water has a high level of mineral or chemical content, use rainwater or distilled water.

If you need to use bore water in an emergency—change it for the above coolant made with clean water as soon as possible.

Follow the directions on the pack when adding anti-freeze solution.

Coolant checking

To avoid the danger of being scalded, remove the radiator cap carefully when engine has been running so that pressure can escape slowly. This is necessary when the engine has been running recently. If coolant is added it should be clean and have a low lime content.

Temperature

Should irregularities in the coolant temperature occur, for example if the temperature indicator light comes on, the coolant level should be checked immediately and topped up if required. Refer to Engine Overheating instructions in Section 3.

Draining and flushing

Every twelve months or 20,000 km drain and refill the radiator.

Fill with a premixed coolant comprising clean water and anti-freeze solution.

WARNING: Corrosion inhibitors and anti-freeze solutions are poisonous.

REMINDER: Replace and properly tighten all drain points before refilling.

Do not use cleaning chemicals to loosen scale unless the cooling system is afterwards thoroughly reverse flushed, otherwise loosened scale may clog the radiator water passages.

For complete removal of loose sediment and sludge from the radiator and water jacket, pressure flushing with an air and water gun is recommended, and as this method of flushing requires special equipment we suggest you have this work carried out by your GMH Dealer.

Use of anti-freeze fluid

Where a vehicle is to be parked overnight or operated for any length of time in regions where temperatures of 0°C or below are encountered (e.g.—snow areas), the recommended brand of anti-freeze fluid should be used in the cooling system in accordance with the instructions specified.

The recommended anti-freeze fluid is permanent type (ethylene glycol) to GM 1899M. Before adding, make a thorough check of the cooling system.

Do not mix different types of anti-freeze as they may be incompatible. If a different type has been used in the radiator, flush and refill with coolant before adding the GM 1899M anti-freeze.

Cold weather draining

If the recommended brand of anti-freeze fluid is not available, the radiator, and cylinder case, MUST be drained before parking to prevent the possible bursting of the radiator, or cracking of the cylinder block which can occur if the coolant freezes. However, damage could be caused to the heater core which may not be drained of coolant.

Cooling System Service

Every year, the cooling system should be serviced as follows:

1. Wash radiator cap and filler neck with clean water.
2. Pressure test system and radiator cap for proper pressure holding capacity. 100 kPa (15 psi).
3. Tighten hose clamps and inspect all hoses. Replace hoses whenever cracked, swollen or otherwise deteriorated.
4. Clean frontal area of radiator core.

Every year or 20,000 km, whichever first occurs, the cooling system should be drained and refilled as follows:

1. Run engine, with radiator cap removed, until normal operating temperature is reached.
2. Drain coolant through the radiator drain valve. (To speed this operation, the drain plug in block can also be removed.)
3. Close valve (install block drain plug, if removed) and add sufficient water to fill system.
4. Run engine, drain and refil the system, as described in steps 1, 2 and 3, a sufficient number of times until the drained liquid is nearly colourless.
5. Allow system to drain completely and then close radiator drain valve tightly (Install block drain plug, if removed.)
6. Fill with premixed coolant—of water and anti-freeze solution meeting GM specification 1899M.
7. Run engine, with radiator cap removed, until normal operating temperature is reached.
8. Check and adjust coolant to proper level and install radiator cap.

NOTE 1: It is the owner's responsibility to keep the freeze protection at a level commensurate with the temperatures which may occur in the area of vehicle operation.

NOTE 2: Alcohol or methanol base coolants are not recommended for your Holden Rodeo KB light-duty truck at any time.

Thermostat

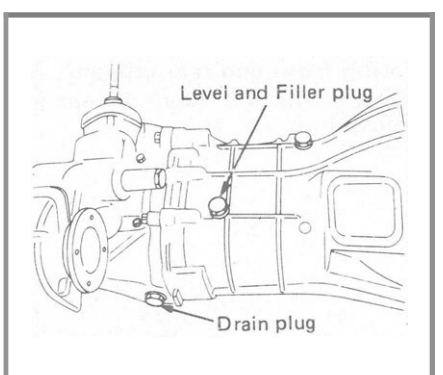
The cooling system is protected and controlled by a thermostat installed in the engine coolant outlet to maintain a satisfactory operation temperature of the engine. This thermostat is designed for continuous use through both winter and summer and need not be changed seasonally.

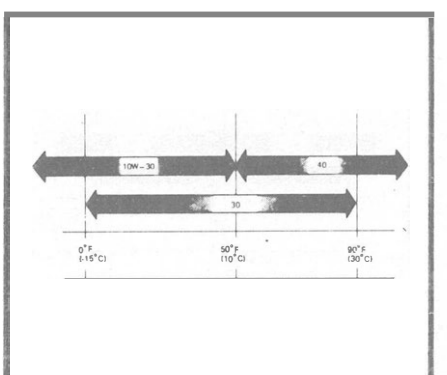
Manual transmission oil

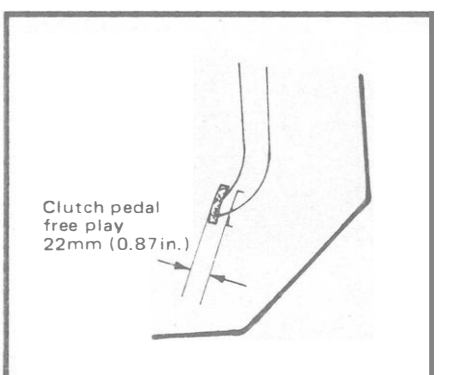
Replace oil at first 1500 km and every 40,000 km thereafter. Every 10,000 km or 4 months, whichever occurs first, check at operating temperature and fill as necessary to level of filler plug hole. Use engine oil of the correct oil viscosity for existing ambient temperatures as shown.

Clutch

The clutch pedal free travel should be checked every 12 months or 20,000 km. The clutch pedal free play is normal if it is about 20 mm (0.87 in). Lubricate the clutch pedal bushing every 12 months or 20,000 km with water resistant EP chassis lubricant.



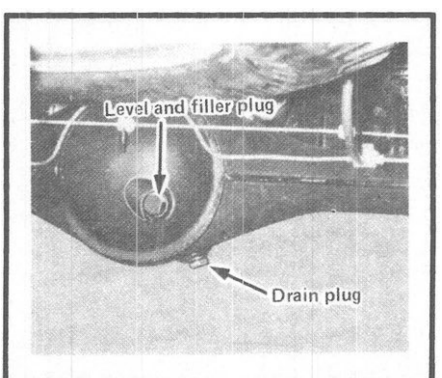


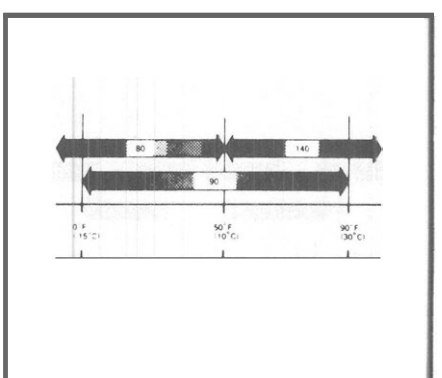


Rear axle

Replace lubricant at first 10,000 km. Every 10,000 km or 4 months, whichever occurs first, check lubricant level and add lubricant. Fill to level of filler plug hole, if necessary. Use GL-5 Gear Lubricant of viscosity shown.

Replace lubricant every 40,000 km. If vehicle is operated in exceptionally heavy work or at continuous high speeds, the lubricant should be changed every 20,000 km. It may be necessary to change lubricant more often if vehicle is used off road in dusty areas.





Propeller shaft

Check propeller shaft flange bolts for proper torque (25Nm/18 ft-lbs).

Wheel bearings

Front and Rear

NOTE: Use wheel bearing grease HN1227 or equivalent. This is a premium high melting point lubricant.

Remove the front wheel hub to lubricate the bearings. To repack rear wheel bearings, proceed as follows: Remove rear axle shaft and bearing holder, wipe clean all traces of used grease and then apply new grease.

The bearings should be thoroughly cleaned before repacking with grease. Front and rear wheel bearings should be lubricated every 40,000 km.

CAUTION: "Long fibre" type greases should not be used on roller bearing front and rear wheels.

Replace the oil seal when you remove hub.

Brake master cylinder

Every 10,000 km or 4 months, whichever occurs first, check master cylinder fluid level. If the fluid is low in the reservoir, it should be filled to the level mark on the reservoir with recommended Hydraulic Brake Fluid.

If the brake master cylinder with level indicator is equipped, the periodic fluid level check is not necessary.

When the brake indicator light on the instrument panel turns on while driving (the key in "ON" position), the fluid reservoir should be filled to the level mark on the reservoir with recommended Hydraulic Brake Fluid.

Brake pedal

The brake pedal travel should be checked every 12 months or 20,000 km. The standard brake pedal free play is about 7 ~ 10 mm (0.3 ~ 0.4 in) when engine stopped.

The brake pedal effective travel is normal if a clearance of about 95 mm (3.7 in) is maintained between the pedal and floor when the brake pedal is depressed all the way down.

If the brake pedal effective travel or the brake action is abnormal, have your GMH dealer or distributor check the brake system at your earliest convenience. Lubricate the brake pedal bushing every 12 months or 20,000 km with water resistant EP chassis lubricant.

Brake and clutch pedal springs

Lubricate brake and clutch pedal springs every 20,000 km or 12 months with chassis lubricant.

Parking brake

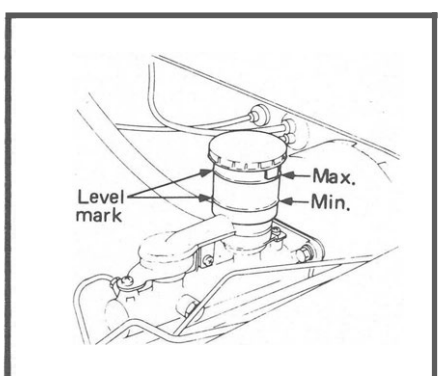
Every 10,000 km or 4 months whichever occurs first, clean and lubricate all parking brake linkage with water resistant EP chassis lubricant.

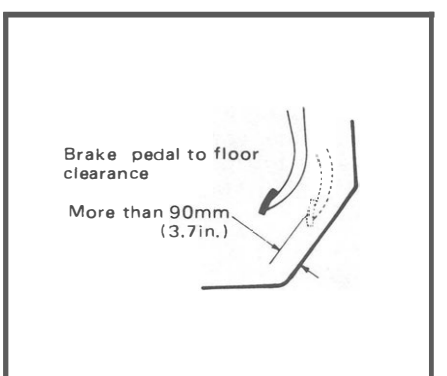
Check to be sure that the rear wheels are locked when the parking lever is pulled up. The parking brake lever travel is normal if it is between 12 ~ 13 notches when pulled all the way up. Check any play on actuater lever.

Steering

The steering gear is factory-filled with steering gear lubricant. Check lubricant every 20,000 km or 12 months, whichever occurs first.

NOTE: Do not use EP Chassis Lube to lubricate the gear. DO NOT OVER-FILL the gear housing.





Steering linkage and suspension

Maintain correct front end alignment to provide easy steering, longer tyre life, and driving stability.

Check control arm bushings and ball joints for wear.

Lubricate tie rods, relay rods, idler arm, upper control arms, and ball joints at fittings with water resistant EP chassis lubricant every 10,000 km or 4 months, whichever occurs first.

Keep spring to axle U bolts and shackle bolts properly tightened (See specifications for torque recommendation).

Hood latch and hood hinge

Every 10,000 km lubricate hood latch assembly and hood hinge assembly as follows:

1. Wipe off any accumulation of dirt or contamination on latch parts.
2. Apply lubricant to hood latch pin and cam.
3. Apply light engine oil to all pivot points in release mechanism.
4. Lubricate hood hinges.
5. Make hood hinge and latch mechanism functional. Check to assure the assembly is working correctly.

Body lubrication

Normal use of a truck causes metal-to-metal movement at certain points in the cab or body. Noise, wear and improper operation at these points will result when a protective film of lubricant is not provided.

For exposed surfaces, such as door checks, door lock bolts, lock striker plates, dovetail bumper wedges, etc., apply a thin film of light engine oil.

Where oil holes are provided in body parts a dripless oil can be safely used, but any lubricant should be used sparingly, and after application all excess should be carefully wiped off.

The seat adjusters and seat tracks, sometimes overlooked, should be lubricated with water resistant EP Chassis lubricant.

There are other points on bodies which may occasionally require lubrication and which are difficult to service. Window regulators and controls are confined in the space between the upholstery and the outside door panel. Turn up the trim without removing it completely as it is bonded at the upper section. Door weatherstrips and rubber hood bumpers should be lightly coated with a rubber lubricant.

Chassis

Lubricate front suspension, steering linkage and propeller shaft. Grease fittings are located on the tie-rods, relay rods, ball joints and universal joints.

Underbody maintenance

The effects of salt and other corrosive materials used for ice and snow removal and dust control can result in accelerated rusting and deterioration of underbody components such as brake and fuel lines, frame, underbody floor pan, exhaust system, brackets, parking brake cables, etc. These corrosive effects, however, can be reduced by periodic flushing of the underbody with plain water. In geographic areas having a heavy concentration of such corrosive materials, it is recommended that the complete underbody be inspected and flushed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out underbody members where dirt and other foreign materials may have collected.

Tyres

The factory installed tyres on your truck are selected to provide the best all round tyre performance for all normal operation.

Only those tyres of the size shown in the Tyre Inflation Table on the following page are recommended for use on your vehicle. Use of any other size of tyre may seriously affect ride, handling, ground clearance, tyre clearance, and speedometer calibration. To achieve best all round vehicle handling performance, belted tyres and bias ply tyres should not be mixed on the same truck. Because of possible adverse effects on vehicle handling, do not mix radial ply tyres with other type tyres on the same vehicle.

NOTE: Refer to the recommended tyre inflation pressures on label attached to the rear face of the driver's door.

Tyre traction

A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and truck speed should be adjusted to the road conditions.

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydroplaning, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed.

1. Slow down during rainstorms or when roads are slushy.
2. Slow down if road has standing water or puddles.
3. Replace tyres when tread depth becomes 1.6 mm (1/16").
4. Keep tyres properly inflated.

Inflation pressure

The use of improper tyre inflation pressures can affect tyre life and load carrying capacity, and may affect vehicle handling. Inflation pressures should be checked at least once a month (and preferably more often) to ensure that the right amount of air is contained in the tyres. With regard to tyre life, too little air pressure allows abnormal deflation of the tyre causing excessive operating temperatures, while too much air pressure prevents normal deflection, making the cord body more vulnerable to road impacts.

Use of the optional reduced inflation pressure shown in the "Tyre Inflation Table" is allowable only when the vehicle is unloaded (i.e. carrying no cargo).

When operating at loads greater than the optional reduced load, the inflation pressure must be increased to the standard inflation for full rated loads.

Tyre rotation

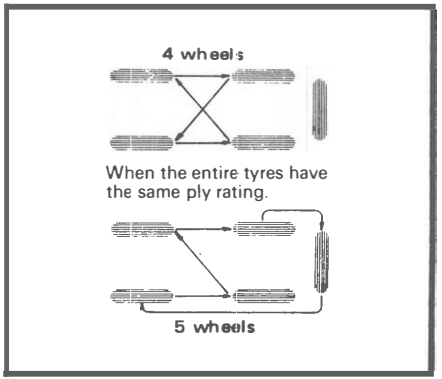
The rotation of truck tyres will minimise tyre trouble and produce longer tyre life. With rotation, accelerated and irregular tyre wear on any one particular tyre will be spread out over the entire set, and replacement frequency will be reduced. Tyre wear may also contribute to such trouble as poor handling and shimmy.

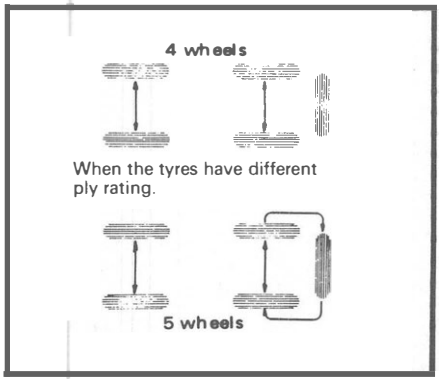
A rotation sequence that moves the front tyres to the rear is a general recommendation. Due to different loading conditions on the wheels, new tyres which are run in on the front wheels usually produce the greatest overall tyre life. To equalise wear it is recommended that the tyres be rotated every 10,000 km. Upon rotation, tyre pressure must be adjusted (front and rear) in accordance with the recommendations for inflation pressure.

Wheel nut–torques

On a new vehicle or after the wheel has been changed, the wheel nut torque must be checked at 1,000 km and every 4 months or 10,000 km whichever occurs first.

Torque: 88Nm (65 ft. lbs.).





TYRES AND WHEELS

TYRE	WHEEL	DESCRIPTION	INFLATION PRESSURE (kPa)			
			UP TO 2 PASS. + 250 KGS			UP TO MAX. LOAD
185R14-8 LT	5.0J x 14	STEEL RADIAL	FRONT REAR		250 250	250 425
P195/75 R14	5.0J x 14	STEEL RADIAL	FRONT REAR		200 200	200 240
P215/75 R14	5.5JJ x 14	STEEL RADIAL ON/OFF ROAD	HWY	FRONT REAR	200 200	200 240
			MUD & SAND	FRONT REAR	130 130	200 240
195R14 LT	5.0J x 14	STEEL RADIAL ON/OFF ROAD	HWY	FRONT REAR	230 230	230 350
			MUD & SAND	FRONT REAR	160 160	230 350

NOTE: Tyre inflation pressure may increase as much as 50 kPa (6 psi) when hot: after vehicle has been driven 15 km or at speeds of more than 100 km/h.

Particular items for 4 x 4 models

Most lubrication recommendations and procedures for 4 wheel drive-equipped vehicles are the same as for corresponding components of conventional drive vehicles. In addition, the following items require lubrication at the intervals mentioned.

Front propeller shaft

Lubricate sliding yoke with water resistant EP chassis lubricant and universal joints with MoS_2 contained chassis lubricant every 12 months or 20,000 km. Every 4 months or 10,000 km, check propeller shaft flange-to-pinion bolts for proper torque of 25 Nm (18 ft. lbs.).

Front axle

Replace lubricant at first 10,000 km and every 40,000 km thereafter. If vehicle is operated in exceptionally heavy work or at continuous high speeds, the lubricant should be changed every 20,000 km. It may be necessary to change lubricant more often if vehicle is used off road in dusty areas.

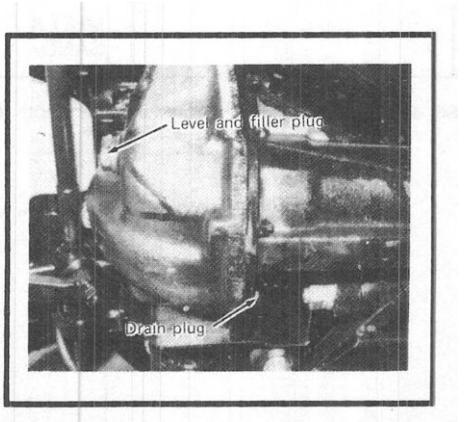
Every 10,000 km or 4 months, whichever occurs first; check lubricant level and add lubricant if necessary. Fill to level of filler plug hole. Use GL-5 Gear Lubricant of viscosity shown on page 88. (Refer to Rear Axle.)

Transmission with transfer case

Replace oil at first 1500 km and every 40,000 km thereafter. Every 10,000 km or 4 months, whichever occurs first, check at operating temperature and fill as necessary to level of filler plug hole. Use engine oil of the correct oil viscosity for existing ambient temperatures as shown on page 80. (Refer to manual transmission.)

Free wheeling hub

Clean and lubricate free wheeling hub at the same time the front wheel bearing is serviced. Use wheel bearing grease GM HN1227 or equivalent.



Recommended lubricants

In order to obtain maximum performance and longest service life from your Holden Rodeo KB, it is very important to use lubricants selected according to the chart. The lubrication intervals in the maintenance schedule and application of new car warranty are based on the use of recommended lubricants as given in this chart which will serve as a guide for selecting lubricants of proper brand name.

Diesel engine crankcase	Diesel engine oil CC grade SAE 30
Petrol engine crankcase	SF grade engine oil SAE 20W/40
Transmission case	SAE30 engine oil
Limited Slip Differential (where fitted)	LSD GL5 grade oil to GM-H HN1561 specification
Manual steering box Front axle (4 x 4 models) Rear axle (not LSD)	Gear oil GL5 grade to GM-H HN1386 or HN1187 specification
Wheel bearings	Wheel bearing grease to GM-H HN1227 specification
Brake and clutch pedal pivots	Grease to GM-H HN1147 specification
Park brake, universal joint and prop shaft sliding yoke	Grease to GM-H HN1271 specification
Hydraulic brake system	Hydraulic brake fluid to GM-H HN1796 specification
Engine cooling system	Permanent anti-freeze type (ethylene glycol) to GM 1899-M specification 30% anti-freeze to 70% water
Chassis	Water resistant EP type chassis lubricant to GM-H HN1271 specification

Guardian Maintenance Plan

The 3-Step Service Concept

The fundamental points are:

1. A basic service interval period of 6 months or 10 000 kilometres whichever occurs first.
2. A "step" principle of 3 correlated services.
3. The frequency of these services is:
   "A" service items — Serviced every 6 months or 10,000 km
   "B" service items — Serviced every 12 months or 20,000 km
   "C" service items — Serviced every 24 months or 40,000 km

Service Designation	—A—	—B—	—C—
Items	Group I *	Groups * I & II	Groups * I, II & III

Up to the 3rd step in the items programmed the earlier steps are included.
The total time/distance range of this Guardian Maintenance Schedule is 66 months or 110,000 kilometres.

Total Programme

Pre-Delivery Service

1 Month—1500 Kilometres Inspection and Adjustment

Then as required: (Months — km)

A @ 6-10,000
B @ 12-20,000
A @ 18-30,000
C @ 24-40,000
A @ 30-50,000
B @ 36-60,000
A @ 42-70,000
C @ 48-80,000
A @ 54-90,000
B @ 60-100,000
A @ 66-110,000

Maintenance

Petrol and diesel engined models

Once the first service has been completed, dependability and performance are influenced by the degree of maintenance the vehicle receives.

Safety, economy and dependability cannot be assured unless regular maintenence is performed, preferably by factory-trained technicians. It is preferable to receive these services from the Dealer from whom the vehicle was purchased. However, maintenance will be attended to by any Authorised GMH Dealer on presentation of Maintenence Plan Booklet, no matter where you may be situated.

What the owner should do

When service, according to the time or distance interval, is due, the owner should present this Maintenance Plan Booklet to a GMH Dealer as an authority to have the items listed attended to. After this work is completed, the owner should see that the Validation Record is stamped and signed by the Dealer. The Booklet with the Validations completed is evidence that a vehicle has been adequately maintained. This is important as it will not only assist in the determination of Warranty Claims, but enhance the value of the vehicle whenever resale is contemplated.

What the Servicing Dealer has to do

Attend to all items listed for the particular service. When this has been done, it is most important that the Service Coupon Validation be signed by the Dealer or his representative.

All operations listed on the Service Coupons should be carried out following the procedures set out in the appropriate service manual.

The one month—1500 kilometre service will be performed without cost for labour by the Selling Dealer.

This service may be carried out by another GMH Dealer provided you have a letter of introduction from the Selling Dealer. Your Dealer will supply the necessary letter of introduction upon request.

Owner's responsibility

Normal maintenance services, as listed in the servicing schedule contained on pages 87 and 88 in this book, and replacement of service items, are the responsibility of the Owner and such are NOT considered, under the provisions of the New Vehicle Warranty, to be rectification of defects in material and workmanship.

Items such as wheel alignment, brake adjustment as a result of lining wear, etc., which may require servicing due to fair wear and tear, will be carried out at the owner's cost.

We strongly recommend that you read the Warranty Certificate at the front of the Owner handbook so that you are conversant with your entitlements.

Water and atmospheric conditions, varying road surfaces, individual driving habits and vehicle usage, greatly contribute to the need for constant maintenance services to promote efficient vehicle operation. (Refer over).

Maintenance Plan

GROUP I

GROUP I Under Hood Operations
Change engine oil and filter.
Check all fluid levels, accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
Wipe inside of distributor cap. (Petrol only)
Inspect engine air cleaner element for restriction and condition. Replace if necessary.
Check air pre-heat control for correct cold and hot operation.
Check operation of idle stop solenoid.
Check automatic choke for free operation.
First "A" Service Only. Check torque of carburettor mounting bolts. Check operation of EGR valve, where fitted.
Clean radiator core—check for blockages.
GROUP I Under Vehicle Operations
Change engine oil filter. (Every 10,000 km)
Check transmission oil level.
Check rear axle oil level and front axle (4 X 4).
Inspect and lubricate front suspension and steering joints.
Lubricate transmission shift and clutch linkages as applicable.
Check parking brake operation and lubricate system. Adjust if necessary.
Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage—brake and fuel lines, shock absorbers and mountings.
Inspect engine and transmission mountings.
Check and adjust clutch control pedal height.
Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
Inspect disc brake pads for wear.
GROUP I Interior Vehicle Operations
Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
Seat belt inspection. Examine webbing condition, buckle operation and rectractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
GROUP I Exterior Vehicle Operations
Lubricate door handle pivots, door hinges, striker bolts or plates and hood lock and catch as required.
Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment.

Maintenance Plan

GROUP II

GROUP II Under Hood Operations
Lubricate distributor. Check condition of cap and rotor. Check TVRS cables for resistance. Replace spark plugs. Check ignition timing.
EGR System Only. Clean valve and manifold opening.
Auto Choke. Check and adjust settings if necessary.
Check ignition timing, engine idle speed and fast idle speed on choke cam. Adjust if necessary.
Serviceable PCV Valves—Dismantle, clean and re-assemble. Disposable PCV Valves—Test and replace if necessary.
Clean or replace fuel filter as necessary.
Drain and refill cooling system. Add specified quantity of anti-freeze.
GROUP II Under Vehicle Operations
Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
Inspect front wheel bearings and check adjustment. Repack only if necessary.
Check steering box. Adjust if necessary.*
Check operation of transmission shift linkage. Adjust if necessary.

GROUP III

GROUP III Under Hood Operations
Replace air cleaner element if not yet changed in previous 24/40 period.
GROUP III Under Vehicle Operations
Repack front wheel bearings.
Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.

Additional Service — refer page 117.

N.B. It should be understood that whenever a B or C service is being carried out, some items on an earlier operation, may be superseded or modified by a later operation.

New Vehicle Preparation Validation

Your new vehicle has been inspected and prepared for delivery by your Dealer, in accordance with the manufacturer's New Vehicle Pre-Delivery Procedures.

Service Manager's Signature .....

Date .....

P.T.O

Pre-Delivery Operations

Check, and adjust if necessary, the following items:

Under Hood Operations
Oil levels of engine, brake master cylinders, and Battery Electrolyte level.
Hose connections, fill radiator and windshield washer reservoir. Ensure anti-freeze is present in radiator.
Air filter element.
Under Vehicle Operations
Oil, fuel, water and exhaust leaks.
Lubrication and operation of steering gear from lock to lock, if excessive free travel evident, adjust steering.
Oil levels in transmission, rear axle and transfer box.
Brake line connections—check hoses for correct clearance.
Brakes—foot and park.
Inspect tyres and inflate to recommended pressures. Check toe-in.
Tighten wheel nuts to specified torque.

Interior of Vehicle
Operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls.
Heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
Operation of all lights, including turn signals and hazard warning; C/A headlamp aim.
Inspect body trim and instrument panel.
Fit of floor mats and completely clean the interior of the vehicle.
Exterior of Vehicle
Wash vehicle, check paint, brush touch-up and minor repair as necessary and polish.
Road Test
Operation of seat belt emergency locking retractors.
Road test for engine, braking, and steering performance, rattles and squeaks, **and correct if necessary.**
Steering wheel spoke position.
Clean steering wheel and control levers.
Check Tool and Jack stowage.
Check operation of locking hubs.

Mechanic's Signature ..... Date .....

Delivery Certificate

The dealer has completed the vehicle identification certificate, and has explained to the purchaser the terms and conditions of the General Motors-Holden's Sales Pty. Ltd., new vehicle warranty and notices and the contents of the owner's handbook. The dealer has informed the purchaser of his responsibility in respect of vehicle maintenance.

The dealer has demonstrated to the purchaser the operation of the vehicle and of all options and accessories.

The purchaser has been informed in writing of the fitting of any and all equipment or accessories not marketed by GMH or an affiliated company, and of any alterations or modifications which have been made to the vehicle and the effect on the GMH sales new vehicle warranty of such fitting, alteration or modification.

The purchaser has inspected the vehicle and acknowledges its delivery in accordance with this delivery procedure.

Purchaser's Signature ..... Date .....

Delivered by: Signature ..... Date .....

Owner's Name Mr. Mrs. Miss .....

Address .....

Town & State ..... Postcode .....

Reg. No. ..... Model Name .....

V.I.N. ..... Eng. No. .....

Cut—remove and keep in Dealer's file

To be kept in Dealer's file

To ensure continued interest in your vehicle, GMH requests that subsequent owners (not original purchaser) fill in and mail one of the attached.

Subsequent Owner Vehicle Identification Certificate

Owner's Name Mr. Mrs. Miss .....

Address .....

Town ..... Phone .....

State & Postcode .....

Reg. No. .....

Vehicle Identification Number (V.I.N.) .....

(Refer Specifications Section of this Manual for location)

Subsequent Owner Vehicle Identification Certificate

Owner's Name Mr. Mrs. Miss .....

Address .....

Town ..... Phone .....

State & Postcode .....

Reg. No. .....

Vehicle Identification Number (V.I.N.) .....

(Refer Specifications Section of this Manual for location)

Place in an envelope and mail to:

The Manager — Warranty Administration,
Service Department,
General Motors—Holden's Sales Pty. Limited,
Box 548D, G.P.O.,
Melbourne,
Victoria. 3001.

Place in an envelope and mail to:

The Manager — Warranty Administration,
Service Department,
General Motors—Holden's Sales Pty. Limited,
Box 548D, G.P.O.,
Melbourne,
Victoria. 3001.

1 MONTH — 1500 KILOMETRE INSPECTION AND ADJUSTMENT

This coupon should not be removed until this vehicle is presented for service.

Owner's Name Mr. Mrs. Miss .....

Address .....

Town & State ..... Postcode .....

Reg. No. ..... Model Name .....

V.I.N. ..... Eng. No. .....

Selling Dealer's Stamp and Signature .....

Date of Acquisition .....

This vehicle has been thoroughly checked in accordance with the schedule on the reverse side of this coupon.

Servicing Dealer .....

Town ..... State .....

Owner's Signature .....

---

1 MONTH — 1500 KILOMETRE INSPECTION AND ADJUSTMENT

This vehicle has been thoroughly checked in accordance with the **1** *month —* **1,500** *kilometre inspection and adjustment.*

Dealer .....

Service Manager's Signature .....

Date ..... Odometer Reading .....

1 Month—1500 Kilometre, Inspection and Adjustment

Under Hood Operations
Change engine oil and Oil Filter Element.
Check all Fluid Levels accessible in Engine Compartment.
Check Manifold Mounting Nuts and Cylinder Head Bolts Tightening Torque.
Adjust Valve Clearances.
Check Air Cleaner Element for Restriction under Extreme Dusty conditions.
Check all Hose Clips in Engine Compartment.
Check Ignition Timing, Engine Idle Speed and Fast Idle Speed on choke Cam. Adjust if necessary.
Check operation of Early Fuel Evaporation (EFE) System for correct operation.
Check Condition and Tension of all Engine Drive Belts—using Tension Gauge.
Check and Adjust Hood Lock and Safety Catch and Lubricate.
Under Vehicle Operations
Lubricate Front Suspension, (Ball and Steering Joints—where applicable).
Change Transmission and Transfer Box Oil. Check Rear Axle Oil Level.
Inspect all Brake Line Connections and Hoses for Leakage and Clearance.
Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
Check Steering Connections.
Check and Adjust Clutch Control Pedal Height.
Interior Vehicle Operations
Check operation of Instruments, Lights, Hazard Warning, Turn signals, Horn, Windshield Wipers and Washers, Seat Belts, Seat Adjustment Mechanisms and Mirrors.
Check Operation of Parking Brake.
Exterior Vehicle Operations
Check Headlamp Aim, Adjust if necessary.
Check Door Lock Operation, Striker Plates, Handles, etc. and Lubricate.
Road Test Programme
All Rattles, Squeaks, Vibrations and Noises should be checked and rectified.
Check vehicle on the road for even braking and steering, transmission operation, engine response and parking brake operation. Check mirrors, seat adjustment and transmission shift pattern.

This Inspection and Adjustment will be carried out without charge to the owner except for any lubricants, etc. used. The Designated Servicing Programme is not to be exceeded without the Owner's prior agreement to additional servicing charges.

RECORD OF INTERMEDIATE SERVICE INTERVAL OIL CHANGES

5,000 km or 3 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.	55,000 km or 33 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.
15,000 km or 9 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.	65,000 km or 39 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.
25,000 km or 15 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.	75,000 km or 45 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.
35,000 km or 21 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.	85,000 km or 51 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.
45,000 km or 27 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.	95,000 km or 57 months Oil Change	Intermediate oil change carried out at ..... km on (date) ..... Servicing Dealer.

6 Months or 10,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

6 Months — 10,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Drain fuel filter (Diesel) and clean fuel pump strainer.
	Wipe inside of distributor cap.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check air pre-heat control assembly for correct cold and hot setting
	Check operation and setting of idle stop solenoid.
	Check torque of carburettor mounting bolts.
	Clean radiator core — check for blockages.
	Change transmission lubricant.
	Change rear axle lubricant. Change front axle lubricant (4 X 4).

	Under Vehicle Operations
	Change engine oil filter.
	Change transfer box lubricant (4 X 4).
	Inspect and lubricate front suspension and steering joints. (Chassis lubrication as chart)
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.

P.T.O.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and park brake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

12 Months or 20,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

B SERVICE

12 Months — 20,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Adjust valve clearance.
	Check tightness of manifold and cylinder head bolts.
	Lubricate distributor. Check condition of points, cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark plugs.
	EGR System Only— Clean valve and manifold opening.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Auto Choke — Check and adjust if necessary settings. Check and adjust if necessary fast idle speed on choke cam. Check choke for free operation.
	Check air pre-heat control assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Replace fuel filter.
	Drain and refill cooling system. Add specified quantity of anti-freeze. Clean radiator core — check for blockages.
	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level and front axle (4 X 4).

P.T.O.

	Inspect and lubricate front suspension and steering joints and steering gear (see chassis lubrication chart).
	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings. Check and adjust clutch fork operating rod free travel.
	Check operation of transmission shift linkage. Adjust if necessary.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
	Inspect front wheel bearings and check adjustment. Repack only if necessary.
	Check steering box and adjust if necessary.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

18 Months or 30,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

18 Months — 30,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Replace fuel filter element (diesel).
	Wipe inside of distributor cap.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check automatic choke for free operation.
	Clean radiator core — check for blockages.

	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.

P.T.O.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

24 Months or 40,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

SERVICE

24 Months — 40,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Lubricate distributor. Check condition of points, cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark plugs.
	EGR System Only— Clean valve and manifold opening.
	Check operation of exhaust heat manifold valve for free operation.
	Replace air cleaner element.
	Auto Choke — Check and adjust if necessary settings. Check and adjust if necessary fast idle speed on choke cam. Check choke for free operation.
	Adjust valve clearance.
	Check tightness of manifold and cylinder head bolts.
	Replace deceleration sensing valve.
	Check air pre-heat control assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check and adjust if necessary engine idle speed.
	Serviceable PCV Valves — Dismantle, clean and reassemble. Disposable PCV Valves — Test and replace if necessary.
	Clean or replace fuel filter as necessary.
	Drain and refill cooling system. Add specified quantity of anti-freeze. Clean radiator core — check for blockages.
	Evaporative control system. Check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Remove cannister and check for cracks or damage. Replace damaged or deteriorated parts as necessary. Replace filter.
	Under Vehicle Operations
	Change engine oil filter.
	Change lubrication in transmission and transfer box (4 X 4).
	Change rear axle lubrication and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.

P.T.O.

	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Check operation of transmission shift linkage. Adjust if necessary.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
	Repack front wheel bearings.
	Check steering box and adjust if necessary

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

30 Months or 50,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

30 Months — 50,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Replace fuel filter (diesel).
	Wipe inside of distributor cap.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check automatic choke for free operation.
	Clean radiator core — check for blockages.

	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.

P.T.O.

Interior Vehicle Operations
Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

36 Months or 60,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

B SERVICE

36 Months — 60,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Adjust valve clearance.
	Check tightness of manifold and cylinder head bolts.
	Change steering gear lubricant.
	Lubricate distributor. Check condition of points, cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark.
	EGR System Only— Clean valve and manifold opening.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Auto Choke Check and adjust if necessary settings. Check and adjust if necessary fast idle speed on choke cam. Check choke for free operation.
	Check air pre-heat control assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check and adjust if necessary engine idle speed.
	Serviceable PCV Valves — Dismantle, clean and reassemble. Disposable PCV Valves — Test and replace if necessary.
	Clean or replace fuel filter as necessary.
	Drain and refill cooling system. Add specified quantity of anti-freeze. Clean radiator core — check for blockages.
	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.
	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.

P.T.O.

	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings
	Check and adjust clutch fork operating rod free travel.
	Check operation of transmission shift linkage. Adjust if necessary.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
	Inspect front wheel bearings and check adjustment. Repack only if necessary.
	Check steering box and adjust if necessary.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

42 Months or 70,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

42 Months — 70,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Change fuel filter (diesel).
	Wipe inside of distributor cap.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check automatic choke for free operation.
	Check torque of carburettor mounting bolts. Check operation of EGR valve, where fitted.
	Clean radiator core—check for blockages.

	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage—brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.

PTO

Interior Vehicle Operations	
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.

Exterior Vehicle Operations	
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

48 Months or 80,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

SERVICE

48 Months — 80,000 Kilometres Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Replace deceleration sensing valve
	Lubricate distributor. Check condition of points, cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark.
	EGR System Only— Clean valve and manifold opening.
	Check operation of exhaust heat manifold valve for free operation.
	Replace air cleaner element if not yet changed in previous 24/40 period.
	Auto Choke— Check and adjust if necessary settings. Check and adjust if necessary fast idle speed on choke cam. Check choke for free operation.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check and adjust if necessary engine idle speed.
	Serviceable PCV Valves—Dismantle, clean and reassemble. Disposable PCV Valves—Test and replace if necessary.
	Clean or replace fuel filter as necessary.
	Drain and refill cooling system. Add specified quantity of anti-freeze. Clean radiator core — check for blockages.
	Evaporative control system. Check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Remove cannister and check for cracks or damage. Replace damaged or deteriorated parts as necessary. Replace filter.
	Under Vehicle Operations
	Change engine oil filter.
	Change lubrication in transmission and transfer box (4 X 4).
	Change rear axle lubrication and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.
	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.

P.T.O.

	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage—brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Check operation of transmission shift linkage. Adjust if necessary.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
	Repack front wheel bearings.
	Check steering box and adjust if necessary.

Interior Vehicle Operations	
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
Exterior Vehicle Operations	
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

54 Months or 90,000 km

Dealer .....

Date .....

Odometer .....

Signed .....

A SERVICE

54 Months — 90,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check automatic choke for free operation.
	Check torque of carburettor mounting bolts. Check operation of EGR valve, where fitted.
	Clean radiator core—check for blockages.

	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level and front axle (4 X 4).
	Inspect and lubricate front suspension and steering joints.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage—brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.

P.T.O.

Interior Vehicle Operations	
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiences observed for immediate rectification.

Exterior Vehicle Operations	
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

60 Months — 100,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Lubricate distributor. Check condition of points, cap and rotor. Wipe inside of distributor cap. Check TVRS cables for resistance. Replace spark.
	EGR System Only— Clean valve and manifold opening.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Auto Choke— Check and adjust if necessary settings. Check and adjust if necessary fast idle speed on choke cam. Check choke for free operation.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check and adjust if necessary engine idle speed.
	Serviceable PCV Valves — Dismantle, clean and re-assemble. Disposable PCV Valves — Test and replace if necessary.
	Clean or replace fuel filter as necessary.
	Drain and refill cooling system. Add specified quantity of anti-freeze. Clean radiator core — check for blockages.
	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level.
	Inspect and lubricate front suspension and steering joints.
	Inspect steering gear, linkage and dust covers for wear and security. Notify owner of any deficiencies, including loss of steering preload, for immediate rectification.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.

P.T.O.

	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Check operation of transmission shift linkage. Adjust if necessary.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.
	Inspect rear brake linings and drums for wear. Wipe off dust. Check self-adjusting mechanism and parking brake adjustment.
	Inspect front wheel bearings and check adjustment. Repack only if necessary.
	Check steering box and adjust if necessary.

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.
	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

Dealer .....

Date .....

Odometer .....

Signed .....

66 Months — 110,000 Kilometre Service

	Under Hood Operations
	Change engine oil and filter.
	Check all fluid levels accessible in engine compartment, e.g. brake, coolant, washer, battery electrolyte, auto transmission, power steering reservoir.
	Inspect condition and adjust tension of all engine drive belts. Adjust if necessary using gauge.
	Inspect condition and attachment of all hoses in engine compartment, including all emission systems pipes and connections.
	Wipe inside of distributor cap.
	Check operation of exhaust heat manifold valve for free operation.
	Inspect engine air cleaner element for restriction and condition. Replace if necessary after testing.
	Check air pre-heat control damper assembly for correct cold and hot operation.
	Check operation and setting of idle stop solenoid.
	Check automatic choke for free operation.
	Check torque of carburettor mounting bolts. Check operation of EGR valve, where fitted.
	Clean radiator core — check for blockages.

	Under Vehicle Operations
	Change engine oil filter.
	Check transmission oil level.
	Check rear axle oil level.
	Inspect and lubricate front suspension and steering joints.
	Lubricate accelerator, transmission shift and clutch linkages as applicable.
	Check parking brake operation and lubricate system. Adjust if necessary.
	Inspect exhaust system and adjacent body areas for open seams or damage. Inspect for leaks and damage — brake and fuel lines, shock absorbers and mountings.
	Inspect engine and transmission mountings.
	Check and adjust clutch fork operating rod free travel.
	Inspect tyres for irregular wear or damage and advise owner, if necessary, of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
	Inspect disc brake pads for wear.

P.T.O

	Interior Vehicle Operations
	Check operation of all warning indicators, ignition steering lock, brake and park brake lights and interior electrical system items and controls. Check all internal lights.
	Check heating, ventilation and demisting system ducts are clear and operation is satisfactory and controls correctly adjusted.
	Seat belt inspection. Examine webbing condition, buckle operation and retractor mechanism function. Notify owner of any deficiencies observed for immediate rectification.

	Exterior Vehicle Operations
	Lubricate door handle pivots, door hinges, striker bolts or plates, hood lock and catch and luggage compartment lock or end-gate regulator as required.
	Check vehicle on the road for even braking and steering, transmission operation, engine response and handbrake operation. Check mirrors, seat adjustment and transmission shift pattern.

Additional Service — refer page 117.

Suggested Labour Times

For Work Performed during Guardian Maintenance Services

"A" SERVICE — BASIC SERVICE TIME — 1.6 HR.

"B" SERVICE — BASIC SERVICE TIME — 2.5 HR.

"C" SERVICE — BASIC SERVICE TIME — 3.8 HR.

THE OWNER WILL BE CHARGED FOR LUBRICATIONS AND MATERIALS USED PLUS LABOUR.
AT THE TIMES RECOMMENDED ABOVE.

*** ADDITIONS TO BASIC SERVICE**

ADDITIONAL TIME AND MATERIAL REQUIRED FOR SERVICING OPTIONAL EQUIPMENT OTHER THAN THAT FITTED TO A BASIC VEHICLE AND REPAIRING OR REPLACING ANY PART FOUND FAULTY DURING THE SERVICE CHECK AND INSPECTION, WILL BE ADDED TO THE SUGGESTED LABOUR TIME AND CHARGES.

WHERE ANY DEFICIENCIES ARE NOTED SUCH ITEMS SHOULD BE REPORTED TO THE OWNER/OPERATOR SO THAT THE EXTRA WORK REQUIRED CAN BE AUTHORISED.

*** ADDITIONAL SERVICES & TIMES WHERE APPLICABLE:**

FIRST "A" SERVICE ..... 0.2 HR.

FRONT WHEEL BEARING REPACK

— "B" SERVICE ..... 0.5 HR.

— "C" SERVICE ..... 0.6 HR.

Index

A

Air Cleaner 71
Anti-Freeze Fluid 73
Appearance Care
Paint and Appearance Items 63
—Vehicle Cleaning Tips 63
—Cleaning of Interior 64
—Cleaning of Exterior 65

B

Battery 70
Bleeding Fuel System 39
Bulb
—Replacement and Specifications 60, 61
Brake
—Brake Indicator Light 26
—Parking 28
—Master Cylinder 77

C

Carbon Monoxide Warning 15
Chassis Number 57
Child's Seat Belts 14
Cleaning of Exterior 63
Cleaning of Interior 64
Clearance of Settings 37
Controls
—Transmission 20
—Four Wheel 21, 22
—Instrument Panel 23, 25
—Ventilation 31
Cooling System
—Draining and Flushing 73
—Corrosion Inhibitor 73
—Anti-Freeze 74

D

Dealer List 47-55
Delivery Certificate 90
Demister 32
Dipping (Headlamp) 17
Dome Lamp
—Replacement 62
Door
—Locks 9

E

Emission Control Systems 41-43
Emergency Conditions
—Emergency Starting 35
—Spare Wheel Storage 39
—Indicator Lights 35
—Wheel Changing 39
—Overheating 36
—Towing a Disabled Vehicle 36
Emergency Starting
—Push Starting 36
—Jump Starting 35
Engine
—Fuel Requirements 3
—Maintaining Oil Level 69
—Oil Filter Replacement 68
—Oil Viscosity Grades 68
—Data 57-59
—Oil Capacities 57-58
—Number 57
—Tachometer 25
Exhaust Gas
—Carbon Monoxide Warning 15

F

Floor Controls
—Brake Operation 28
—Clutch Pedal 29
—Parking Brake 28
Freeing from Sand 36
Four Wheel Drive
—Indicator Light 26
—Shifting Procedure 20-22
Fuel
—Gauge 25
—Requirements 3
—Systems 71
—Pump 72
—Filter 71
—Tank Capacity 59
Fumes (Petrol) 15
Fuse System 60

G

Generator Indicator Light 25
Getting to know your Rodeo
—Safe Driving 7, 8
—Keys and Locks 9, 10
—Rear Vision Mirrors 11
—Running in 3, 6
—Seat Adjustment 10
—Seat Belts 12-14
Maintenance 68-123

H

Hazard Warning Flashers 35
Heater System 31-33
Headlamp
—Dipping 17
—Replacement 61
High Beam Indicator Light 23, 25
Hot Air Intake 15

I

Indication Numbers 57-58
İdling Control Knob 21
Indicator Lights 23, 25
Instruments
—Bulb Replacement and Specification 60
Instrument Panels 23, 25
—Light Switch 27
—Headlamp Dipping 17
—Windshield Wipers and Washers 27

J

Jacking 39, 42
Jump Starting 35

K

Keys and Locks 9, 10

L

Lamps
—Turn Signal 17
—Headlamp High Beam 17
—Light Switch 27
—Bulb Replacement and Specification 60-62
Lane Change Indication 18
Licence Plate Lamp
—Replacement 62
Light
—Indicator 17
—Switch 27
Loading Information 4, 5
Locks (and Keys)
—Keys 9
—Door Lock Operation 9
—Fuel Filler Locking Cap 10
Lock
Engine Hood 126
Lubrication 83

M

Maintenance Certificates 95-116
Maintenance Plan 84, 87, 88
Mirrors (Rear Vision) 11

O

Odometer 25
Oil
—Pressure Indicator Light 25
—Maintenance Level 69
—Filter Replacement 68
—Viscosity Grades 68
—Transmission Oils 83
Overheating 36
Owner Relations 45
Owners Responsibility 86

P

Paint Work 63
Parking Brake 28
Parking Brake Indicator Light 26
Parking Lamp
—Replacement and Specification 61
Pre-Delivery Check 89
Push Starting 36

R

Radio 30
Radiator
—Overheating 36
Rear Vision Mirrors 11
Running In 3, 6

S

Safe Driving Hints 7, 8
Safety Checks 121-123
Seat Adjustment 10
Seat Belts 12-14
Serial Numbers 57
Service Station Information 121-123
Shifting Procedure
—4 Wheel Drive 20-22

Spare Wheel Storage 39
Specifications 57-59
—Serial Numbers 57
—Vehicle Identification Number 57
—Engine Data 57-59
—Clearances and Settings 57
—Fuse System 60
—Headlamp and Bulb Specifications 60
Speedometer 23, 25
Starting and Driving 18
Starting and Operating
—Exhaust Gas 15
—Transmission Controls 20
—Floor Controls 28-29
—Instrument Panels 23, 25
—Instruments and Controls 25, 26
—Indicator Lights 23, 25
—Ventilation and Heating 31-33
—4-Wheel Drive 20-22
Steering Column Controls
—Steering Lock 17
—Windshield Wipers/Washers 27
—Lane Change Indication 18
—Turn Signal Operation 17
—Headlamp Dipping 17
—Hazard Warning 35
Stop/Tail Lamp
—Replacement and Specification 60

T

Table of Contents 1
Temperature
—Gauge 26
Towing a Disabled Vehicle 36
Transmission Controls
—5 Speed 20
—4 Wheel Drive 21, 22
Turn Signal
—Operation 17
Turn Signal Lamp
—Replacement 62
Tyres 80
—Inflation Chart 81

U

Upholstery Cleaning 64

V

Valve Clearances 70
Vehicle
—Identification Number 57
—Weight 4
Ventilation Systems
—Ventilators 31
—Heater/Demister 31-33

W

Water Separation Draining 72
Warning Light
—Brake 26
—Generator 25
—Oil Pressure 25
—Hazard Warning 35
Washing 66
Weight Vehicle 4
Wheel Changing
—Jack 39, 40
—Tightening Torque 46
Windshield
—Defogging 32
—Wipers and Washers 27

Safety checks

This section discusses the various components and systems of your vehicle that should be checked regularly to help maintain safe and dependable vehicle operation. Some checks should be made by your dealer or service station, and can be done conveniently while your vehicle is in the shop for other regular maintenance service. Other checks can be made easily by you, the owner.

Checks to be performed by your dealer or service station

Checks to be made at first 1,000 km (600 miles)

- Drive belt—Check fan drive belt for cracks, wear and tension.

  Adjust or replace as necessary.

Checks to be made every 10,000 km (6,000 miles) or 4 months, whichever occurs first.

- **Drive belt**—Check fan drive belt for cracks, wear and tension.

  Adjust or replace as necessary.

- **Fluid or lubricant levels**—Check level of fluid or lubricant in brake master cylinder, battery, rear axle, front axle (4 × 4 models), engine and transmission. Check fluid level of windshield washer reservoir. Engine coolant should be checked for proper level. Any significant fluid loss in any of these systems or units could mean that a malfunction is developing and corrective action should be taken immediately.

- **Suspension and steering**—Check for damaged, loose or missing parts, or parts showing visible signs of excessive wear or lack of lubrication in front and rear suspension and steering system. Questionable parts noted should be replaced by a qualified mechanic without delay.

- **Tyres and wheels**—Check tyres for excessive wear, nails, glass, cuts or other damage. Make certain wheels are not bent or cracked and wheel nuts are tightened to 88Nm (65 ft-lbs). Uneven or abnormal tyre wear may indicate the need for alignment service. Check tyre inflation pressure at least monthly, or oftener if daily visual inspection indicates the need.

  Truck type tyres should be replaced when tread depth becomes 1.6mm (1/16 inch).

- **Exhaust system**—Check complete exhaust system and nearby body areas for broken, damaged, missing or mispositioned parts, open seams, holes, loose connections or other deterioration which could permit exhaust fumes to seep into passenger compartment. Dust or water inside the cab may be an indication of a problem in one of these areas. Any defects should be corrected immediately. To help ensure continued integrity, exhaust pipes rearward of the muffler must be replaced whenever a new muffler is installed. Use genuine parts specified for your vehicle.

- **Parking brake linkage**—Lubricate all parking brake linkage with water resistant chassis lubricant as specified. Check for damaged or missing parts, interference or binding. Any deficiencies should be corrected without delay by qualified mechanic.

- **Brake lines and hoses**—Check lines and hoses for proper attachment, leaks, cracks, chafing, deterioration, etc. Any questionable parts noted should be replaced or repaired immediately. When abrasion or wear is evident on lines or hoses, the cause must be corrected, and the lines or hoses replaced.

Checks to be made every 20,000 km (12,000 miles) or 12 months, whichever occurs first.

- **Lighting system**—Check headlights for proper aim. Correct as necessary. More frequent checks should be made if oncoming motorists signal when you are already using your low beams, or if illumination of the area ahead seems inadequate.

- **Accelerator control**—Lubricate accelerator pedal bushing with chassis lubricant. Check for damaged or missing parts, interference or

binding. Any deficiencies should be corrected without delay by a competent mechanic.

- **Service brakes and parking brake**—Check disc and drum brake linings and other internal brake components at each wheel (drums, wheel cylinders, etc.).

  Parking brake adjustment also should be checked whenever drum brake linings are checked.

  Note: Replace deceleration sensing valve every 2 years.

Checks to be performed by owner

(Owner safety check)

Listed below are the safety checks that should be made by the owner.

These checks should be made every 4 months or 10,000 km (6,000 miles) whichever occurs first, or more often when the need is indicated. Any deficiencies should be brought to the attention of your dealer, as soon as possible, so the advice of a qualified mechanic is available regarding the need for repairs or replacements.

- **Lap and shoulder belts**—Check belts, buckles, retractors and anchors for cuts, fraying or weakened portions, loose connections, damage, and proper latching and releasing action. Check that anchor mounting-bolts are tight to the floor.
- **Steering**—Be alert to any changes in steering action. The need for inspection or servicing may be indicated by "hard" steering, excessive free play or unusual sounds when turning or parking.
- **Windshield wipers and washers**—Check condition and alignment of wiper blades. Check amount and direction of fluid sprayed by washers during use.
- **Wheel alignment and balance**—In addition to abnormal tyre wear the need for wheel alignment service may be indicated by a pull to the right or left when driving on a straight and level road. The need for wheel balancing may be indicated by a vibration of the steering wheel or front end while driving.
- **Brakes**—Be alert to changes in braking action such as repeated pulling to one side, unusual sounds when braking or increased brake pedal travel. Any of these could indicate the need for brake system inspection and/or service.
- **Parking brake**—Check parking brake holding ability by parking on fairly steep hill and restraining the vehicle with the parking brake only.
- **Glass**—Check for broken, scratched, dirty or damaged glass on vehicle that could obscure vision or become an injury hazard.
- **Lights**—Check all instrument panel indicator lamps, and interior lights, and licence plate lamp, headlamps, parking lamps, tail lamps, stop lamps, turn signals, backup lamps, clearance lamps and hazard warning flashers. Have someone observe operation of each exterior light while you activate the controls.

- **Horn**—Blow the horn occasionally to be sure that it works.
- **Rearview mirrors and sun visors**—Check that friction joints are properly adjusted so mirrors and sun visors stay in the selected position.
- **Door latches**—Check for positive closing, latching and locking.
- **Hood latches**—Check to make sure hood closes firmly by lifting on the hood after each closing. Check also for broken, damaged or missing parts which might prevent secure latching.
- **Fluid leaks**—Check for fuel, water, oil or other fluid leaks by observing the ground beneath the vehicle after it has been parked for a while. Also observe fluid lines and hoses connection points. If petrol fumes or fluid are noticed at any time, the cause should be determined and corrected without delay because of the possibility of fire.
- **Seat back latches**—Check to see that seat back latch is holding by pulling forward on the top of folding seat back.

Conscientious attention to all of these safety checks on a regular basis and prompt correction of any problems will help to keep you, your passengers and your vehicle safer, thus avoiding or reducing potential injuries and damage.

Service station checklist

This checklist is a summary of detailed information contained elsewhere in the Handbook.

Fuel

Refer page 3 for correct fuel reference.

Bonnet release: Pull the T lever under the right side of the dash. The bonnet will automatically release. To fully open lift the safety catch lever located underneath the front edge of the bonnet, slightly to the passenger side of centre, raise the bonnet, unclip the stay rod and place in the locating hole for support. To close—free the stay rod and replace in the retaining clip, lower the bonnet and press down firmly until the lock is engaged.

Engine oil: Check oil level and maintain at level indicated by checked area on dipstick.

Refer page 69.

Radiator coolant level:

Maintain at 2-3 cm below bottom of filler neck. Check at least weekly.

Refer page 73 (Overheating, page 36).

Battery: Check electrolyte fluid level. Refer page 70.

Windshield washer: Check reservoir fluid level and top up as required.

Tyre pressures: Check pressures weekly and maintain as specified on the chart found inside the glove box lid.

Refer page 81.

Service station information

Refer to ''Service and Maintenance'' Section for further details

Petrol cap

NOTE: If the petrol cap requires a replacement, only a genuine GMH replacement cap should be used. Failure to use the correct cap can result in a serious malfunction of the system. Correct replacement caps may be obtained from your GMH dealer.

Hood release—To raise the engine hood, unlock the safety catch by pulling the release lever under the instrument panel (driver's side), raise the hood all the way up and engage rod in head reinforcement so that it stays in position. Be sure support rod end engages in the hole on the head reinforcement.

To close, remove the support rod end from the hole on the hood reinforcement put the support rod back into the clip on the deflector panel. Then, lower the engine hood to a horizontal level and push down on the front until it is locked in position.

Engine dip stick—Located on side of engine block. Check oil level as the last operation in a fuel stop. Maintain between high and low level indicated in the dipstick.

Engine oil recommendation—Use SE oil for petrol engine, and CC or CD oil for diesel engine. The chart in the Service and Maintenance section will serve as a guide for selecting proper oil viscosity.

Tyre inflation pressures—Check at least monthly. Keep inflated to pressures shown in Tyre Inflation Table in the ''Service and Maintenance'' section.

Windshield washer—Check reservoir fluid level regularly. Use a washer fluid of well known brand.

Battery—Check fluid level monthly. If the fluid level is low, add only colourless, odourless drinking water or distilled water to bring level to bottom of the vent well in filler opening.

ACCIDENTS

All motorists are advised to learn what to do at the scene of an accident, particularly where persons are injured. Injured people can choke to death if their air passages are not cleared. They can bleed to death unless the bleeding is stopped. They may require mouth-to-mouth resuscitation, may have to be moved, even though badly injured. It is important that you understand how to avoid further damaging an injured neck or back or other broken limbs.

The following notes may help.

- **Part 1. Accident—being involved.**
- **Part 2. Accident—being a witness.**
- **Part 3. Medical assistance.**

Part 1. Accident—being involved

If you are involved in an accident you are advised to do as follows:

Stop immediately.

Remember that time is vital. Remain calm and alert. Think quickly and clearly.

Give all possible assistance to all injured persons. (See Part 3 Medical Assistance.)

Send for police and ambulance if anyone has been injured. Send information as accurately as possible. Give the exact location, the number of injured people and a brief report on the overall situation.

Perhaps take charge of the situation.

Warn all other traffic approaching the scene. Turn off ignition switches. Stop any smoking near spilt petrol. In darkness, try and light up the area to warn others.

Clear the road of accident debris.

Exchange your name, address, vehicle registration number and the vehicle owner's name and address with the other parties involved in the accident.

If damage to property only has occurred, report the facts to the owner of the damaged property or to his or her representative; to any police present at the scene or to the nearest Police Station.

Try and note all important facts because such details may be important if needed later.

Part 2. Accident—being a witness

If you witness a road accident or it becomes your task to stop and help at the scene of an accident, do this:

Keep in mind that an observant witness can prove most helpful. Some day you yourself might be very glad of help from a witness.

DO NOT stop at the scene of an accident *just to be a spectator.*

Where other people are already in attendance and giving assistance, **you should stop only if you can contribute assistance.**

Give what assistance you can to any injured persons. (See Part 3 Medical Assistance.)

Follow most of the steps suggested in Part 1. Perhaps you may have to take charge of the accident situation.

Part 3. Medical Assistance

Keep calm and think clearly.

Your experience may not be much but do your best. Don't just stand by and let an injured person die.

- Look after the unconscious person first. Check for breathing. If no breathing, then check if air passages

are clear, i.e. nose and mouth. Use your fingers to clear air passages if necessary. If the air way is clear then mouth-to-mouth resuscitation may be needed at once.

Unconscious people can choke.
Carefully turn to one side.
Tilt the head back slightly.
Wipe out the mouth with your finger to remove blood, vomit, broken teeth or dentures.

- You must be most careful in moving an injured person. Often it is best not to move at all but, in conditions of danger, that is not always possible. Serious and permanent damage can be done to an injured neck or back if not supported during movement. NEVER BEND A NECK OR BACK. KEEP THEM STRAIGHT. All injured limbs require support when an injured person has to be moved.
- Provided it is not dangerous to do so because of other injuries, an unconscious person will do best in the "coma position" illustrated here.

Lay the person on one side and—if it will not aggravate any injuries—then: Bend the uppermost knee until the thigh is at right angle to body.
Bend the uppermost arm and elbow so that the hand lies near the face.
Gently pull the underneath arm so that it rests straight on the ground free of any body weight.

- Try to stop bleeding by applying direct pressure, using your hands, or by pressing torn flesh together. Use any clean cloth available. Fold cloths to make pads. If necessary, press one pad on top of another. Keep pressure around edges of a wound BUT NEVER USE A TOURNIQUET.

Shock may be treated by reassurance, relieving pain, controlling any bleeding and keeping the injured person warm *but not hot.* Best not to give any fluids and NEVER ALCOHOL.

- If the injured person is in danger and has to be moved, try and have three or four people help and concentrate on not bending the neck, spine and injured limbs. **Keeping the neck and spine straight is most important.**

Illustrations reproduced from "The Victorian Road Code" with permission from Road Safety and Traffic Authority of Victoria.